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Manufacturers Record

Exponent of America



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Baltimore, Md.
MARCH 3, 1921

THE FACTS vs. SOMETHING ELSE

As members and agents of the Federal Reserve System are moving Heaven and earth—or should we substitute another word for Heaven?—through speeches and in other ways, to deny that there has been any deflation of credit, it may be well to repeat from our issue of November 11, 1920, the following:

"In circular letter No. 94, issued on December 20, 1919, to all member banks, the Federal Reserve Bank of Richmond said:

"Our present task, therefore, is to proceed with the deflation of credits as rapidly and as systematically as possible."

"On April 26 circular-letter No. 95 to member banks said:

"It is a recognized function of the Federal Reserve System to exercise control over the volume of credit and currency. * * *

"It is recognized to be unsafe to go further with commodity prices at such a dangerous height. * * *

"If all the banks in this district will earnestly and conscientiously endeavor to limit credits to necessary activities for production purposes, insist that the burden of carrying loans on Government securities shall be gradually assumed by subscribers, etc."

"The circular-letter of June 21 said:

"Immediately upon the passage of the amendment we issued our Circular No. 95, in which we expressed the belief that if all banks in this district would earnestly and conscientiously endeavor to limit credits. * * *

"We have sent out information intended to enable all member banks, and particularly those borrowing rather heavily from us, to co-operate with us intelligently for the conservation of credit."

"On August 24 the circular-letter said:

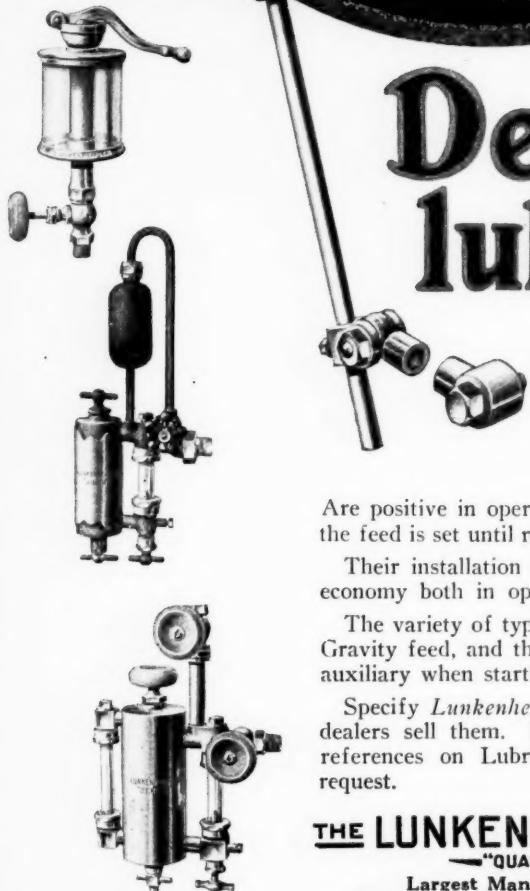
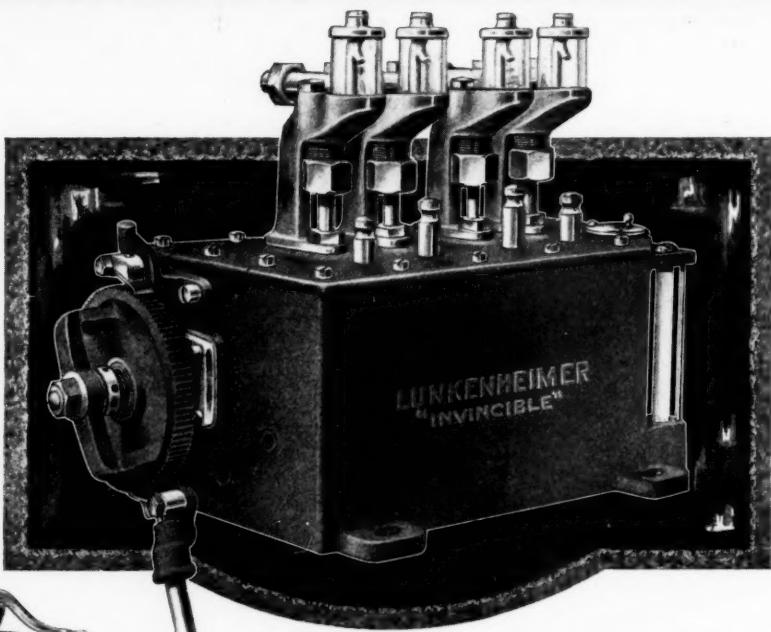
"We had been conducting a campaign for the conservation of credit for more than a year. * * *

"If we can all pull together, however, for a while longer and continue to exercise the greatest possible care in the granting of further credits, etc."

"On September 23 the circular-letter to member banks said:

"It is in our opinion more important than ever that great conservation should be used in granting of credit, etc."

When any of our readers hear the statement that there was no deflation of credit last year by the Federal Reserve System, which is being repeated over and over again in speeches, we suggest that they read to the speaker and his audience all of the foregoing. It will amuse the audience, even if it does not amuse the speaker.



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Exponent of America

MARCH 3, 1921

Volume LXXIX

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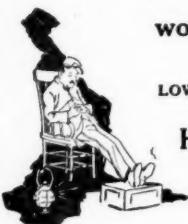
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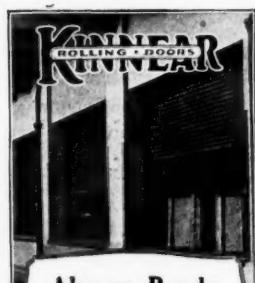


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WEEKLY. }

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WE CAN TAKE HEART AND GO FORWARD.

THE two decisions rendered by the Supreme Court on Monday will be productive of vast benefit to the business interests of the country. The decision in favor of the Farm Loan banks will open up a very broad field for the assistance of the agricultural interests of the entire country and should give heart to all farmers everywhere.

The decision against the constitutionality of the Lever Act will unshackle business and make it impossible for the Government through that act to dominate business which should be controlled by the law of supply and demand and not by arbitrary acts of Congress.

In the end, the Lever Act has done far more harm than good. Designed to control prices in time of war, it has been used unwisely and has done the consumers of the country infinitely more harm than it has done good.

These two decisions clear the way for great business improvement in many directions. When to these decisions is added the bill for the relief of the railroads and the fact that the present Federal Reserve Board cannot much longer completely dominate the banks of the country, the time has come for every man to rejoice in the change, to take heart and go forward.

ECONOMIC VOLCANIC ACTION.

MR. CHARLES S. KEITH, president and general manager of the Central Coal & Coke Co. of Kansas City, Mo., in the course of a letter referring to the deflation work which has been under progress, says:

"There is just one difference between this and other post-war periods, that is, those in the saddle at the present time are endeavoring to accomplish within a few short years what the people of other post-war periods have taken one-fourth to one-half a century to do. In other words, they have sought to do by volcanic action what others have permitted to come about through normal operation of natural economic laws."

An Era Passes.

THIS week marks the passing of an era. Under the ordinary constitutional processes, there passes from leadership of the Republic a coterie of men into whose keeping was confided the destinies of the nation in days of supreme stress. They were led in the intoxication of power to neglect of the vital domestic necessities of the nation, and they sought, by extraordinary use of the treaty authority, to reverse the currents and goals of national purpose, overturn the national traditions and devote the energies and resources of the people to a hopeless experiment in world dictatorship or subordination to foreign practices, as the case might be. They went into office with the huge reservoirs of national credit almost untouched. They leave office with the outgo pipes unplugged. Billions, the expenditure of which need not be mourned, they spent with glorious results. Other billions they wasted. They substituted intrigue for the more or less open diplomacy of the fathers. They loved their secret trades. They took office in one kind of world; they leave it in another kind. Their concepts and their theories, their modes of doing business, have been appraised and weighed in the balance. The result of their policies is envisaged in a continent which they made inert. They blundered or they slumbered. What they did that was good is written in the everlasting records of the race. The things that they did not do and the evil things they did do also are recorded in economic history. Idealism and dreaming that take from men, women and children their bread and butter are not debatable as to merits. They are inexcusable. The proponents of concealment may strut and swear before congressional committees and be applauded at a signal, but the whole people have rendered their verdict, in letters of fire, and there is no profane word coming from the mouth of any man that can change in one iota that verdict and its meaning. All is written, although kindly history may deal gently with the truth, touching with bold strokes of praise the real accomplishments and pressing but ever so lightly on the pen of criticism.

The whole world looks this week to Washington. On the shoulders of those assuming power the destinies, it is not too much to say, of civilized men depend. If form can be given to chaos; if the healing touch of common sense can transmit into hope the dull despair now unhappily so prevalent in all nations; if the talent of achievement can point the way whereby the crushing burdens of a supreme triumph may be made bearable; if by sternness there and mildness here the discipline of righteousness can be restored and the human mind returned again to the pursuit of normal purposes; if, in a word, the digestive process can be made to begin functioning, then may we on our knees thank Providence and in all humbleness be about our ploughing and our hoeing with sublime faith in the morrow.

We see no evidence of exalted genius in the new authorities. The incoming Administration, on the whole, appeals as typically American—average American. We rejoice to say that there is lacking any evidence of super-brilliance. Matter-

of-fact people are taking office. They represent the great body of American thought. We look for nothing spectacular from them, no playing to the galleries, no attempt to win plaudits abroad by vicarious sacrifices at home—just everyday policies such as the ordinary business executive would adopt in his own business from day to day. There will be no spectacular short cuts. Not without reason have the American people always been fearful of political brilliancy. They loved and admired Webster and Clay and Calhoun, but they did not seat any one of them in the White House. There is an irresponsibility about genius that precludes its employment in the supreme direction of national affairs.

There are many who believe that there is no hope for the civilized world except on its knees. The difficulties are too complex, the inside of the cup too saturated with social poison, to permit escape unless by superhuman wisdom. Man proposes, God disposes. For four centuries America has been earth's living miracle. It has moved forward in faith. The nation is an experiment in faith; not in the faith of a sect, but of faith in a living God, in Omnipotence, in militant Christianity. The practice of the Golden Rule is a key, as it has ever been, to success. And men are merely instruments in the hands of inscrutable forces that move mysteriously but surely to work their purposes. The nation, therefore, asks no miracles of those who now step into power. It does ask of them a solemn recognition of the supreme responsibility they have undertaken, a sincerity in their devotion to the traditions of the country, allegiance to the great principles which hitherto have been a safe guide, honorable care of affairs at home before indulgence in undue experiments abroad, a due regard for trade and business, through which men get their daily bread, subordination to no class, but government for all the people, in fairness and in justice.

All men are fallible. It is the duty of those placed in editorial positions to guard the well-being of the country and cry their warnings when danger is apparent. We expect to criticise this new Administration, as we did the old one, when programs and policies appear to us to be unwise and likely to lead to disastrous results. So shall we support it enthusiastically when it deserves support. There are many eyes to see and many voices to cry out—even geese have saved a republic. There is wise government when men who sit in Washington can hear the murmurs of national sentiment and interpret their meaning.

THE SECRET COTTON DEAL OF 1915.

WHEN the British Government was considering ways and means of carrying out its agreement to bolster up the cotton market in 1915, we understand that Mr. W. P. G. Harding, now Governor of the Federal Reserve Board, suggested that they go into the New York Cotton Exchange and buy heavily. The British thought there might be a little delay in doing this, so they began the buying movement in Liverpool first. When the Germans went down to Washington to find out why the market was rising instead of falling, they learned enough to follow the advice given them, namely, to go in and buy also. They bought, it is said, 1,000,000 bales.

When Governor Harding was delivering his address at Birmingham, after consultation with the President, wherein he stated that he thought prices would go up, giving a variety of reasons, he knew, as a matter of fact, that they had to go up, because the contraband order had been issued a few days before, and the buying movement the British had agreed to sponsor was already under way. It was not any law of supply and demand, but an arbitrary agreement that was forcing the price of cotton up late in August, 1915. A market that was so easily manipulated once might easily be manipulated again.

THE WAY TO GET BUSINESS IS TO GO AFTER IT.

ONE day last summer, when business conditions generally were showing a decided tendency toward curtailment, the Hart-Parr Company, manufacturer of tractors at Charles City, Iowa, analyzed the situation with care and concluded to make an extra effort for new business in some of their most difficult territory.

The results, as told elsewhere in this issue in a letter from the company, more than exceeded their expectations. A trainload of 100 tractors was sold in the dry farming section of Colorado east of the Rockies. Another trainload was sold direct to farmers and dealers throughout the Eastern Iowa district. In the cars attached to the end of this second trainload when it came time for delivery were 75 farmers, who came to the factory, studied production, spent two days in conference, and after becoming convinced that the tractor would help solve their problems, many of the farmers selected the tractors they wanted delivered to their farms and accompanied them home on this train.

This is an inspiring story. As the statement from the Hart-Parr Company points out: "If one manufacturer learns that another manufacturer is succeeding during a period of business depression, it will stimulate him to go out and do likewise."

There should be vastly more of this sort of constructive, intensive effort and drive for business in the South and throughout the country. It is an antidote for pessimism, the very best antidote in the world, and the effort brings its own reward in the form of new business, not to mention the stimulating effect of the example on every other industry and line of trade.

Creative salesmanship produces results today as always. And by comparison, and because of the difficulties, the rewards seem to be greater than ever.

INSENSATE FINANCIERS RUN A RACE WITH REPUDIATION.

THE cables report Sir George Paish, the British economist, as saying: "The war created a European debt amounting to nearly \$250,000,000,000. I have examined conditions in various continental countries, and have reluctantly concluded that practically the whole of Europe will repudiate its debts."

We have not been at all times greatly impressed with the ability of Sir George Paish as an economist, but drastic world deflation could never have meant anything but ultimate and sure repudiation. We have stated so repeatedly.

Under deflation conditions, not a nation in Europe could pay its debts, and the burden on the United States would be almost intolerable, as the public is beginning to learn.

KEEP THE DESPOILERS OUT.

THE New York Journal of Commerce reports that directors of the German Potash Syndicate want to come to America to revise potash contracts. They are not wanted in America. If the United States has to buy any potash abroad, it can get it from the French potash fields. The entire domestic demand can, in fact, be got from domestic sources. If Germans announced that they wished to visit this country in order to discuss the best means and methods of blowing up New York, they would scarcely be permitted to enter. They have the assurance, apparently, to announce in advance that they are coming over here to discuss methods of destroying absolutely a great but new American industry. There has already been too much consulting with Germans and profit-dealing with them. God help men who want to shake hands with the murderers of their sons!

An Open Letter to Hon. John Skelton Williams, Comptroller of Currency and Member of Federal Reserve Board

YOUR letter to Judge Gary of the Steel Corporation, urging that his company is making larger earnings than are justified, and that he should reduce his prices in the interest of the country, prompts me to ask you if it would not have been a great blessing to the country, far surpassing any possible benefit from a reduction of the prices of iron and steel, if the Federal Reserve Board had reduced its rate of interest to a point which would have saved the entire country from having to pay the enormous rates of interest which have prevailed during the last 12 months?

Last July you boasted that the deflation of credit was of benefit to the country and that it had brought about a decreased production of nonessentials and an increased production of essentials. At that time I called upon you and the Federal Reserve Board to mention a single essential thing the production of which had been increased by the action of the Federal Reserve Board in restricting credits.

To that request no reply was ever made, for it was impossible for you and the members of the Board to make a reply which would show a single essential thing that had been increased in production by reason of the deflation of credit. The only thing that the deflation of credit has increased is poverty and bankruptcy, nonemployment and the terrific business and industrial depression throughout the country which you are now demanding shall be alleviated by the reduction in the price of steel and iron.

It is impossible for you and the other members of the Federal Reserve Board not to realize that the deflation of credit of which you boasted in July last has brought about the most terrific loss which this country has ever sustained. Your own figures published in your annual report show that there was a decrease last year in the value of farm, mine and factory production of \$12,000,000,000 to \$18,000,000,000, and a decrease in industrial securities listed on Wall Street of \$3,000,000,000 to \$4,000,000,000, and a decrease in railroad securities running far into the billions. This aggregate decrease in the wealth of the country last year certainly amounted to at least \$25,000,000,000, based on your own estimates.

That is about as much as our entire bonded indebtedness for carrying on the war.

Moreover, the money expended for war purposes stimulated business. It gave employment to millions of people; it increased production and, therefore, was not, except to a limited extent, an actual loss. The \$25,000,000,000 of decreased value last year was an actual loss, as it swept that amount of wealth entirely away, with nothing to its credit.

Though you boasted that this deflation of credit would bring about increased production of essential things, you have, since that boast was made, seen a decrease in railroad freights that leaves tens of thousands of cars idle. You have seen iron and steel production drop to almost the lowest point in pro-

portion to capacity in the history of the trade—especially is this true of pig-iron for the open market. You have seen cotton mills closed and thousands of other industries forced to reduce their output and to discharge, in the aggregate, millions of hands. You have seen the value of farm products, including crops and livestock, decline over \$8,000,000,000. You have seen in Governor Harding's testimony that in September last the situation got beyond the control of your Board.

It never required any degree of intelligence or study of financial history to know that this condition would inevitably follow the action of the Federal Reserve Board when it began this campaign of deflation, unless perchance its members could be made to see the inevitable folly of their course and could be induced to have the moral backbone to retrace their steps.

You have seen the Federal Reserve Board and the Treasury Department dishonor every promise made to the bond buyers; you have seen the bonds thrown out of national banks by the action of the Federal Reserve Board, and you have seen the Treasury Department, the Secretary being a member of the Board, boast that he had been able to buy in \$2,000,000,000 of Government bonds, which, with the other hand, he and other members of the Board had forced upon the market at a disgracefully low price. You have thus seen every pledge made by the Board to the bond buyers violated and trampled in the dust and the honor of the nation stained as it had never been stained before in the financial history of this country.

As a member of the Board you have been partly responsible for the enormous profits of the Federal Reserve banks. They have earned net profits of about 150 to 200 per cent, a shame and a disgrace to the system and to the country. Such earnings are indeed profiteering with a vengeance. In charging the rate of interest which has made it possible for them to make these tremendous net profits the Board burdened the country with a rate of interest which has added billions of dollars to the cost of doing business and has been largely responsible for the destruction of \$25,000,000,000 of values.

You are doubtless familiar with the recent statement of Mr. Reginald McKenna, formerly Chancellor of the Exchequer of England, one of the great financiers of Europe, in the course of which, referring to the deflation of credit, he said: "I think I have said enough to show that an attempt at monetary deflation of this kind can only end in the strangulation of business and of widespread unemployment."

What Mr. McKenna stated every intelligent man has long known. If every member of the Federal Reserve Board did not know what would be the result if the Board should carry out its deflation of credits, he by that very fact proved that he was wholly incapable of measuring up to the great responsibilities resting upon the members of the Board.

Efforts have been made recently by some members of the Board to prove that there has been no deflation, but as this is a definite denial of your own statement of last July, when you boasted of the good work of deflation of credit, I leave

the settlement of your statement and of its denial to your own good judgment.

From time to time it has been rumored in Washington that you were opposed to the deflation campaign of other members of the Board. I trust that this is true, but if so, what a limitless opportunity for good you missed when you failed to make an open fight against the work of the Board, even if that required your resignation in order to stand for public welfare.

In view of your demand upon Judge Gary that the prices of iron and steel be reduced, and of your statement that the earnings of that company are too great, I cannot possibly see how you could have favored the high rates of interest and the vigorous deflation of credit which has been the policy of the Board, even though you did in July announce that the deflation of credit had lessened the production of nonessential things and increased the production of essential things. While criticizing the prices of steel, I trust, therefore, that you will with even greater vigor, late in the day though it may be, criticize unsparingly the exorbitant rates of interest charged by the Federal Reserve Board, the radical restriction of credit by the Board and the ungodly profits made by the 12 branch banks of the Federal Reserve system.

So far as your letter to Judge Gary is concerned, I take it for granted that he will be able to meet all of the points that you have raised, but I am at a loss to know how the members of the Federal Reserve Board will meet the issue before the American people that \$25,000,000,000 of wealth has been swept out of existence and that instead of production of essential things having been increased, there has been a tremendous decrease of every essential thing and a vast increase of unemployment, of bankruptcy, of suicides by reason of financial distress and all the other ills which have come in limitless number as a result of the deflation-of-credit policy which has been pursued by the Federal Reserve Board under existing management.

RICHARD H. EDMONDS,
Editor Manufacturers Record.

McADOO IS NOT A COMPETENT ADVISER ON THE RAILROAD SITUATION.

IT is an impertinence for Mr. McAdoo to advise the country on the railroad situation. He is the man who promised that Government operation would keep rates down and bring about greater efficiency. Almost the first thing he did was to increase rates. Then he loaded the railroads with thousands of unnecessary employees and increased the cost of operation to such an extent that with the highest rates ever known the roads are unable to pay their way. He was a party to the enactment of the Adamson Act, which for sheer cowardice and in its disastrous results has never been equaled by any other piece of legislation ever passed in this country. The experiment in Government control and operation of the roads began under Mr. McAdoo. When he had got the properties into an impossible situation, he got out and left the wreck for others to dismantle. The word "failure" but mildly describes the conduct of the railroads under the McAdoo regime.

With such a record, which all men know, what difference does it make what McAdoo thinks? When he demands Government ownership, that of itself is a pretty good sign that Government ownership is just the thing to be avoided. The railroad problem must be settled on practical lines, not by faith in a lot of promises by discredited politicians.

A PROGRESSIVE MOVE BY A BALTIMORE BANK.

THE Citizens National Bank of Baltimore, one of the city's most progressive financial institutions, has established what is known as an industrial department for the benefit of its customers.

The plan, which is based upon the theory that not infrequently faulty production structure and not capital shortage is responsible for the financial difficulties of certain manufacturers and others seeking loans, while in operation in certain Northern cities, specifically in New York, Albany and Cleveland, is an innovation in the South. Briefly, it creates a point of contact between bank and customer which hitherto has been neglected.

Custom has sanctioned a procedure something along these lines; a prospective borrower goes to his bank, offers his statement and is refused the loan or granted the desired credit, and relationship between the bank and the customer ceases until the time for settlement arrives. There are many cases, it is believed, where a line of credit might be established if the banks knew more of the conditions surrounding the concern making the application, and which conditions cannot be deduced from the mere formal statement of business done. There is little time, were there the inclination, for a banker to familiarize himself with all its customers' businesses. Then, too, it is impossible for the ordinary bank official to have knowledge particularized along the line of the special business involved which will enable him to say whether better terms are warranted to the would-be borrower than the statement offered seems to guaranty.

The industrial department of the bank here steps in, and after investigation its recommendation may result in the making of the loan, or, if the negotiation be one not regarded as suitable for the bank, the borrower may be put in touch with other sources of capital and his needs met.

Again, frequently a concern, while holding its own, is not making the steps forward that its management feels should be made. The industrial service of the bank functions. The management of the concern in question probably feels that it could do much better were it in possession of additional capital. The industrial service expert points out to him how, by change in production methods, plant layout, business efficiency or industrial management, expenses may be curtailed or output increased.

This industrial service of the Citizens National Bank will of necessity be largely advisory, in which case it will be rendered without charge; but should the survey suggest any detailed plan of operation, a mutually satisfactory basis of compensation can readily be agreed upon. In selecting an industrial service expert the bank has naturally and wisely chosen a man familiar with the fundamentals of manufacturing and business rather than one brought up in the atmosphere of banking.

IS IRON A NONESSENTIAL?

THE overwhelming majority of the merchant iron furnaces in America is out of blast. It is a great business tragedy to think of these plants, that cost millions of dollars, with the hundreds of men they employ—all idle—not turning a wheel—immense possibilities for production and for wealth doing nothing.—Matthew Addy Company's Iron Market Report.

And yet the country was solemnly informed last summer by the Comptroller of the Currency, a member of the Federal Reserve Board, that restriction of banking credits was in order to increase the production of "essentials" and decrease the production of "nonessentials."

America Cannot Stand Still; Expansion Is the Key to Prosperity

ONE year ago this Government committed itself to a policy which has come already to be distinguished as an unpardonable crime. The American people sensed it; they could not analyze it in detail, and because they sensed it they gave the overwhelming verdict of November last.

The decision reached in Washington was that American business was too big; that times were too prosperous; that destiny must be unlocked from enterprise, and that the whole machinery of movement, in business, in finance and in transportation should be squeezed and compressed into the narrow limits of the little America which the gentlemen in charge of the Government visualized as amply large enough for their own capacities and abilities.

Confidence was filling freight cars. The problem was not how to employ empty cars, but how to get in a hurry the new cars requisite to handle the traffic offering. Never had the railroads known such business. There stepped into that situation the demon fear, and the hearts of the railroad executives were set to trembling. They acquiesced in, they invited, the ruinous and fatal priority orders of last summer, the immediate effect of which was to prevent highway and other construction throughout the nation, slow up business everywhere, freeze credits, shut down plants, create an artificial coal panic and make the field ripe for a harvest of sorrow and ill-times. The traffic machinery was not adequate for the traffic. Good, brave and confident Americans, of the sort that flashed in sorrier days their twin lines of steel from ocean to ocean, when faced with a similar problem would have fought and planned for but one solution—to build new traffic machinery that would be adequate. It would never have occurred to them to make the country fit the coat; they would have made the coat fit the country.

When Washington decided on this universal contraction, the fleets of ships were never cargo-hungry. Space was at a premium, and the Government's investments promised to yield a handsome income. Now ships lie rotting at the wharves. There is nothing for them to do. Money by the tens of millions has been lost—tossed away—because, forsooth, some little-minded men dreamed that there was too much business.

The assassins of business met in their weekly conferences at Washington and planned to co-ordinate and bring into unison of action their various agencies of debilitation. France, all but bankrupt after bearing the brunt of the most stupendous and costly war the world had ever known, stood steadfast in the faith. In faith alone she held a future; in faith alone did any other nation hope for succor, except, perhaps, the United States. During the past year, says Mr. Robineau, governor of the Bank of France, "we have welcomed, whether by means of rediscount or by direct discount, all paper whose creation responded to the legitimate need of commerce and production. By this liberal policy, to which we have remained and always will remain faithful, we expect to support with all our power the activities of widely varying business enterprises which, in France, are endeavoring to lessen the violence of the crisis."

Compare such a statement with the havoc-working announcements made last fall by Secretary of the Treasury Houston. Compare it with all pronouncements from the Treasury and the Administration—a body of men rendered insane by their fanatical pursuit of low prices. They did not mean low prices; they meant dishonest prices. When a government, the symbol of a people's power, embezzles that power to destroy the value of the property owned by that people, and with deliberate intent utilizes that power not to drive prices down to a fair price, but to drive them down as far as they can be driven, without respect to original cost, it commits a crime incomparable in the magnificence of its

destruction and more diabolical in its results than the pen of human can depict.

Men know how figures can be made to lie. There are those who will read this article who have heard with their own ears men of so high position in the Government as Governor Harding declare that there has been no deflation, no constriction or contraction of financial facilities. But there is not one intelligent banker in this whole wide land who does not know that the contrary is the truth. We find the Comptroller of the Currency admitting that there have been wiped out of existence during the past year from \$12,000,000,000 to \$18,000,000,000 in the values of farm, factory and mine products alone. During the calendar year 1920 there was a decline in the deposits of national banks alone of \$1,588,656,000. By some process of bookkeeping it has been made to appear plausible to assert that loans were not contracted. But let it be remembered that Governor Harding sought to create the impression, in testimony before the Joint Agricultural Committee of the two Houses of Congress, that the earnings of the Federal Reserve regional banks were something under 7 per cent, whereas it is known of all men that the earnings in fact were so infamously high that even Governor Harding attempts to apologize for them in the annual report of the Federal Reserve Board, in which, unfortunately, the per cent of earnings is not given. We do not know what part of reported loans is simply apparent. We do know that it has been a custom of many banks to demand that a borrower agree to leave half the sum he borrows in the bank. There are some other things that every intelligent man knows. The fact has been very well stated by Governor Harding himself: "High interest means forced sales." So is it also known, beyond the possibility of denial, that it was the intent and the purpose of the fiscal authorities to have forced sales; that they envisioned the sheriff's market which obtained, and which it was their purpose to bring about, and that the quantity of loans may mean nothing at all if the character of the loans was such as to compel forced sales, as was the case. And the crime of the Federal Reserve Board would be the greater if, when it was informing the whole country that it intended by means of credit control to force deflation, it was not in fact pursuing that policy. But any man who deals with banks knows the truth. He does not have to have Governor Harding or anybody else tell him that there has been no contraction. His own banks have told him. Moreover, you contract loans when you force prices down to such a point that the property of an ordinary citizen is no longer worth a loan. In his annual report Governor Harding admits that the fiscal policy "checked expansion." It killed expansion; killed it at a time when Governor Harding himself was declaring that increased production was the world's only hope. Deflation is not only contracting loans. The most terrible sort of deflation can be the checking of normal expansion.

But we have here at least an acknowledgment from Governor Harding that the fiscal policy was attuned to the general Administration policy: "Cut down business. Forbid and prevent all expansion." Too much business! Too much prosperity! And there was inculcated in the minds of business men everywhere a dread of the future; an unholy fear that if they attempted anything new or sought to go ahead, their own Government would strangle and overcome them.

Yet it will be noted that all this time the Treasury was not fearing inflation in other countries, where the printing press had become a money factory. They were pouring American dollars into foreign tills, with no security except note of hand, and were themselves promoting and encouraging commodity speculation of the worst sort, in circumstances that never can

be explained. We think Europe ought to have been and should be helped during the reconstruction period, but we are nauseated by the spectacle of a Secretary of the Treasury who held up his hands in horror at the thought of extending credit to Europe, on business terms, through the War Finance Corporation, while all the time he was advancing Europe credit "without terms." Verily, indeed, much power has made these fiscal generals mad.

But the whole conspiracy has not yet been worked out to its fullest accomplishment, and the same elements that were able to dedicate this Government to the viciously un-American policy of littleness and wholly unnecessary sacrifice are confident that they can extend their ruinous programs into the next Administration. They have in mind the emasculation of historic Republican tariff principles. They talk about assurances of "living prices." Living prices for whom? By what philosophy of religion or on what platform of mere decency can the theory be supported that farmers should produce on a starvation basis in order that city toilers may secure their food for less than cost of production? The living wage is the barometer of prosperity, not living prices. It is economic madness, this drive for lower prices irrespective of production costs. It is the madness that leads to ruin and collapse.

These elements aver that there must be low prices; that we shall produce none of those things which we can import more cheaply; that the sole aim and purpose of the Government should be to put before each American three times a day a mess of potage. He may give up in return his independence and his self-respect, but that matters not if his belly be full. By the foreign debt they would betray us; a foreign debt that under deflation never can be paid; a debt the payment of which in honor we may not be able to accept. Deliberately, we say that if to collect the debt we must abandon national traditions, pauperize our agriculture, menialize our labor and destroy the national initiative, then the payment of the debt would be a curse to us and to our children forever, and the day of the collection would be a black one on the calendar so long as the memory of it remained. They say low tariffs will bring payment of interest due. Low tariffs will deplete the tax collections in every county in the United States and deplete them far more than will be gained from any possible interest payments. Why throw away twenty billions of income for a half billion in interest? It is insanity.

We want to import the things we cannot produce. We do not want to encourage the importation of things we can produce. Do we gain anything if we ruin our citrus industry in order to permit Italy to make interest payments? Can we afford to destroy the long-staple cotton industry that Egypt may have more revenue to pay through British hands into our treasury? Will it avail us anything to encourage the use of Argentine meats in the United States if we depopulate the stock on our Western prairies?

This nation has been builded up by establishing premiums on native production. This nation is the world's great protest against serf labor, against the whole economic system in vogue in Europe. People came here to get away from those things. They were tired of being held in the mold their fathers inhabited. They wanted a place where they could get a decent return for their labors and struggles. They wanted to get away from the deadening competition of a system which made them rivals of the cheapest exploited labor that could be found on earth. The battle against slavery was a battle of independent men against ruinous competition. A great American contribution to the world was the demonstration of the fact that it was possible to build up a civilization which could maintain high standards, in spite of pauper competition, by the application of mentality to the discovery of means and methods for protection. It was a contribution which the Germans grasped, and protection was rapidly giving them the dominant trade position in Europe. They knew.

The attack on adequate tariff protection is part and parcel of the general assault on the American world position. If successful, it means the gradual lowering of American standards and a march toward the situation occupied by Great Britain just before the war broke out, where even skilled workmen earned so little that they slept out of doors in the summer to avoid paying rent. It means the sort of unrest which has all but driven Europe into anarchy and has made bolshevism possible. It means that the American market is to be made a public barbecue. It means that the ancient glory of the people has departed; that we are dedicated to pursuit of the easiest way. After us the deluge! Stupidity is unpardonable. We must array ourselves in virility and manliness. We must fight to uphold American principles; fight to retain our self-respect; battle to lift the world up to our level, not be willing to sink down to its level.

If ever there comes a day when cheapness is the goal of American endeavor; if the politicians are right who think that all the American is after is cheap food; if the apostles of littleness and fearfulness, of contraction and construction, are able to make this great people worship inertia, then we need worry no more about bolshevism or any other "ism," for our doom will already have been sealed.

We appeal to the history of the past year for vindication of our position. The values that have been swept away in property and in morale, the loss of billions in money and whole atmospheres of purpose tell their story as we cannot write it. Stupid policies—aye, they are worse than crimes. We have little advice to give to an incoming Administration, but we say, with all emphasis of which we are capable, that it must begin immediately the process of sanitation in Washington and fumigate the Government from top to bottom; drive out the meager-visioned folk, restore confidence in America, cease the worship of cheapness, build for an assured tomorrow and have faith. The very soul of the nation has been invaded; its very heart made weak. Who vigilantly fights for regeneration, who is bold enough to be a real American, who thrusts from him the tempting arguments of international profiteers, who makes the well-being of the whole people his supreme endeavor, who battles to keep up and improve our standards of living, setting an example to the world, him the nation will never desert. The compromisers and the compounders have had their day. Any who chose to follow in their paths will land where they have landed—outside the pale.

WHY NOT BE FAIR?

"**T**HE under Cabinet officers are now in course of selection. Mr. Hughes, who is to be Secretary of State, having picked Mr. Henry P. Fletcher, a former Ambassador to Mexico, as his assistant. One feature of this selection, which seems to have been at the instance of Mr. Harding, and which may strike the public as an interesting one, is the fact that Mr. Fletcher formerly held a diplomatic post under President Wilson—and maybe it may be regarded as another evidence of Wilson's peculiar capacity for selecting competent men."—Charlotte Observer.

Mr. Fletcher entered the diplomatic service in 1902 by appointment of President Roosevelt. He served continuously in various important diplomatic positions until February, 1920, when he resigned as Ambassador to Mexico because he refused to carry out President Wilson's policies, believing that Mr. Wilson was making monumental blunders in handling the Mexican situation. Why not be fair?

NOT NEEDED.

WAS it profanity, useless, silly, stupid, asinine profanity, which kept Dawes out of the Cabinet? At any rate, the country may be thankful that a professor in the fine art of teaching profanity was not needed by Mr. Harding in his political family circle.

Criminality Upheld by Radical Labor Leaders

TYPICAL of the methods adopted by radical union labor leaders to maltreat and murder men who refused to follow their commands is a condition which has been prevailing for some time at the Cramp Shipyards in Philadelphia. In giving some details of the situation, the reporter of the Public Ledger of that city says:

"While violence stalks abroad in the northeast district, worry and actual fear are guests on the hearthstone. Several women were interviewed yesterday whose husbands had been among the victims of assaults by strikers. All of them showed that they are living under a tremendous nervous strain, and the majority were ready to acknowledge it. Some of the women blame groups among the strikers for the acts of violence that are occurring daily. A few expressed the view that the 'union leaders' might have something to do with it. All were of the opinion that the brutality displayed will benefit the union cause not at all. * * *

"A surprising fact was brought to light in conversation with the wife of a workman who was nearly killed a week or two ago, who said that some of the strikers who were forcing other Cramp employes to quit work have obtained employment in another factory as strikebreakers, and added: 'There is no justice in the strike and assaults. My husband was in his right. He kept on at work and minded his own business. He has not belonged to a union for some months.' * * *

"She described the murderous assault on her husband, which occurred virtually at his very doorstep. Hobbnailed and brass knuckles were used with terrible effect. The man suffers badly from injuries to his head, and the doctor has said that it will be many long months before he recovers even partially. His hearing has been nearly destroyed, in addition. * * *

"Some of the strikers have said that they will get him yet. * * *

"Union leaders and radicals are definitely to blame for the present shipyard strike and the violence which has been so markedly characteristic, according to the women quoted."

These statements are but typical of many others that are being published in the Philadelphia papers. Serious disorders and riots have characterized the progress of the strike, and the District Attorney states that he proposes to prosecute these lawbreakers to the limit.

In a later issue of the Public Ledger appears a long list of crimes committed by the strikers against the men who have tried to keep at work. The Ledger says the strikers "started their campaign of brutality and strong-arm tactics to intimidate loyal workers and prevent their returning to their jobs," and then it gives a list of 87 men and boys who had been attacked up to that time, and describes the mob methods used by the strikers. The men were attacked whenever they were found in any part of the city. Some of them were partly disabled, some of them were beaten into unconsciousness, some of them were totally disabled, one man having been hit with an iron bar or with brass knuckles on the back of the head; one man who had just recovered from illness was badly beaten and kicked in the stomach, and in one case a policeman was attacked and badly injured while trying to defend a workman who had been knocked down and assaulted while on the ground. Another man was knocked down and assaulted, and his wife, who tried to save him from further attack, was severely injured by kicks and totally disabled for a long period. Another was attacked and badly beaten and robbed of his money, while the crowd threatened to burn his home.

These are but typical illustrations of what is taking place in this strike at the Cramp Shipyards. The brutality of the men who are waylaying, assaulting and seeking to murder the men who are anxious to work and care for their families is simply in line with what is being done throughout the entire country where union laborers go on a strike if they are misled by radical leaders.

In Alabama a somewhat similar condition existed, where union miners committed a number of murders in their effort to prevent nonunion men from operating the mines.

Where radical labor leaders get control of unions and a

strike occurs, murderous assaults upon nonunion men and women are in constant evidence. Under the leadership of these radical labor men other men who ordinarily would be law-abiding citizens become rioters and murderers. They do not hesitate to club or use brass knuckles or other death-dealing instruments upon any man who dares to assert his right to work untrammeled by labor leaders.

Against such crimes this nation must protect itself or else it will go down in ruin.

Many people are asking the question as to why lawlessness reigns to such an extent as it does throughout the land, and some people are trying to charge it to prohibition, while, as a matter of fact, this lawlessness existed long before prohibition went into effect. Much of the crime wave which spreads throughout the country is due to the encouragement given to crime by radical labor leaders and by the premium placed upon criminality through the failure of the officers of the law to enforce the law. This has been true as to the action of the National Government as well as of State governments. Men upon whom rests the responsibility of enforcing the law have permitted ceaseless criminality to reign throughout the country for many years, and in doing so have encouraged the spirit of lawlessness and of robbery and of murder, because men everywhere saw that the union-labor strikers could commit crimes without being punished therefor. If we would find one of the most potent reasons for the criminality which endangers the very existence of our Government and of civilization in this country, we must go back to the unpunished murders among the union-labor element of the country, taught by their leaders to commit crimes for the express purpose of destroying the individual right of other men to work. Labor unions as they have been conducted for many years now, with some notable exceptions, have been a tremendous power for the development of the spirit of lawlessness which prevails throughout the land.

THE WORLD'S DECLINING GOLD OUTPUT.

THE decline in the world's production of gold needs to be carefully studied by every thoughtful man who realizes the influence which the world's supply of gold has had upon prices and prosperity. The Financial Review of New York, in calling attention to the decline of gold output in the Rand district, says that the world's gold output is imperiled, and that the leading production district faces extinction at an early period. It gives the total figures of the world's gold production expressed in fine ounces for 1920 as 16,505,000, as compared with 22,758,800 ounces in 1915 and 22,023,400 ounces in 1910.

After the free-silver campaign of 1896 there came about a great increase in the world's output of gold, and coincident therewith an enormous expansion of industry and prosperity, with advancing prices. Of recent years, however, there has been a steady decline year after year in the world's gold output. This decline, which has been very pronounced in the United States, is equally as noticeable in nearly all other countries. Everywhere there is a decreasing output of gold, and unless new gold discoveries are made on a scale sufficiently large to enormously increase the world's output, it will be impossible for the world to maintain the present gold standard.

We must find some new way for financing the world. Possibly it will come through world-wide bimetallism. We cannot depend upon the present supply of gold for carrying on the world's increasing business. To undertake to do so and hold rigidly to this would ultimately mean either a world revolution or a repudiation of all world indebtedness.

GERMANY WON BY HYPOCRITICAL TEARS.

A RECENT dispatch from Germany says warrants have been issued for the arrest of four chemists, two of whom have entered the employ of the Du Pont interests of Wilmington. It is charged that these men are divulging secrets and making it possible for American interests to get information as to inside knowledge about chemical developments in Germany.

On behalf of the Du Pont interests, it has been said that the two German chemists which they employed place the Du Ponts in a position to greatly advance some important chemical matters. But American chemists rightly resent the fact that these two Germans have been placed at the head of a certain department and American chemists long in the employ of the Du Ponts are required to report to these Germans.

The Du Pont Company explains its position in the matter by the following statement:

"The Du Pont Company has not violated any law or business principle, and these accusations made by the German Kartel are simply another move in its campaign to prevent the development of the dye industry here."

"In advance of any formal answer which may be made to the charges, it is only justice to the accused German chemists to say that the Du Pont Company employed Dr. Joseph Flaschlander and Dr. Otto Runge as the best experts it could find to interpret and help put into practical operation the processes and formulae covered by the German patents which were seized and made available to American manufacturers when this country went to war with Germany.

"It has been demonstrated beyond question that in many cases the records filed with the Patent Office are incomplete, give misleading information and are otherwise so craftily devised that only a German chemist who has had experience in the production of the articles covered by the patents can put them to practical use. Dr. Flaschlander and Dr. Runge were not employed to bring over formulae and such other documents as are mentioned in the foreign dispatches.

"The American chemist has already solved from a laboratory standpoint so many of the problems involved in the manufacture of dyes that about all that is needed from Germany is the worker experienced in the manufacturing end of the business.

"The United States is the only dye-producing country which has not yet taken steps to protect itself from a re-establishment of the German monopoly and to insure the building up of a home dye industry. So far efforts to secure legislation which will help develop the American industry have failed, and the new industry, as soon as our technical state of war with Germany ends, will be left open to Germany's fierce attack. It seems necessary, therefore, to go to unusual lengths to develop the industry quickly, and the employment of men who have had experience in the production of dyes certainly can help with this rapid development."

The report from Germany is doubtless camouflage. It is more likely that these chemists were permitted to leave Germany for the express purpose of learning secrets of American chemists and carrying them back to Germany than it is that they are bringing us any secrets of importance needed by American chemists. We cannot understand how any American concern can for one moment be willing to trust to the honor and integrity of any German chemist, or, for that matter, any other German, until that nation has been redeemed and its people in sackcloth and ashes have repented of their unspeakable crimes against humanity. That American chemists should have to be under the direction of German chemists, it matters not what may be the extent of the knowledge of these chemists, is an outrage upon the men who in this country have sought to develop the chemical industry.

Too many people throughout this country are ready once more to enter into trade relations with Germany and buy German stuff in preference to American products for the saving of a few dollars, even though by buying German-made goods they are taking work from the American workman.

This country may well honor any concern which takes the position recently stated as to its own work by the Jacksonville Metropolis. When criticised for its vigorous fight against

the Hun, which it still justly keeps up, the Metropolis said it wanted no advertising or any other business from Huns living in this country, and it added that, though it had recently had an offer of German-made paper which would save it \$30,000 a year as compared with the price it is paying American paper makers, it preferred to lose that profit rather than to buy a German product. We believe that is the spirit with which American business people should deal with the German question.

There has not come out of Germany one scintilla of evidence that the German people are in any way whatever penitent for their crimes, and until the criminal does show penitence there is no reason why he should be regarded other than as a criminal. The punishment to be inflicted upon Germany in the matter of reparation is so triflingly small as compared with the cost of the World War which it brought about, for the purpose of looting the world, as to be ridiculous if to say so did not reflect so much upon the stupidity of the Allies in demanding so little. Careful students of the war cost have estimated the financial loss at from \$300,000,000,000 to \$350,000,000,000 or more. The amount of the reparation demanded of Germany figured on a cash basis as at present would be only about \$20,000,000,000. The effort of Germany to try to make the world believe that it cannot afford to pay this indemnity is only in keeping with the rottenness of German life and German character.

Mr. G. W. Shartle, a manufacturer of Columbus, O., in a letter referring to this situation, said:

"I can view these questions from a first-hand standpoint, as I was in Germany after the armistice and know the condition of the German Government and its people about as well as any living man in the A. E. F. They are able to pay and make good any fines the Allies place against them. Of course, their propaganda will go forward; they have denied their ability to pay, but it must be remembered that Germany herself was never damaged by the war, and it is a shame that we did not get into Germany as they got into Belgium and France. We would then have given them the actual taste of war. On the way to the Rhine many of these Germans thought that the war had ended as a victory for them. They did not realize the exact conditions until the Allies began pouring their armies on the Rhine; then they began to wake up. Their attention to the American army was only a propaganda, for they stated in the beginning that they would win the war by blood or by tears, and finally they won the war by tears. It is too bad the armistice was signed, and the time will come when we will all regret it very much."

SOME WISE WORDS.

IN discussing the question of reparation by Germany as some of the problems which the world faces, a leading minister, in a personal letter to the MANUFACTURERS RECORD, writes:

"I am at one with every man who reiterates 'Vengeance is mine; I will repay, saith the Lord.' But penalty and vengeance are as wide apart as the poles. And further forgiveness does not forbid me to hold on to the burglar until he has let go the loot and has disgorged enough of his money to pay for the damage he did while trying to steal. On moral grounds I grieve because the German people have not sorrowed over the crimes to which they were parties, but my thought goes further **impudent, powerful Germany will threaten the peace of the world before another 50 years have gone unless something is done to change her character or crush her purposes.** The kind of religion that most Germans have will not change their national character. Therefore, the need of evangelizing Germany. This is no trifling problem. Even our Baptist Germans have not been swift to realize German guilt in the great war."

"The whole question of preparedness is so vast, intricate and terrible that one shudders as he thinks of the necessity for it. And yet, can anyone be blind to that necessity?

"The papers this morning report a speech by an American politician bearing an Irish name and revealing Sinn Fein sympathies, who says that the way to secure the peace of the world is to dismember the British Empire and persuade Japan to become the leader of China and India! Think of a world with America's 100,000,000 charged with keeping the peace when there

March 3, 1921.

MANUFACTURERS RECORD.

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are 700,000,000 Orientals led by Japan! Puck says, "What fools these mortals be." Carlyle said, "There are 1,300,000,000 people on this planet—mostly fools."

"When the British Empire and America lose their grip or fly at each other, the woe of the world will begin—such woe as the skies above have never yet seen."

THROW OPEN THE DOORS.

THE Waco (Texas) Times-Herald, in referring to the suggestion of the MANUFACTURERS RECORD that the meetings of the Federal Reserve Board and of the Interstate Commerce Commission should be open to the public so that the country might know what is going on, says:

"But, esteemed Baltimore contemporary, what guarantee of relief is there in the open hearing? If the I. C. C. can fix the rate on freight from Galveston to Houston, what will it profit us to have an open hearing? If the Federal Reserve Bank can deflate at will, how shall the open hearing modify the blow? There is need for some serious thinking and for genuine statesmanship right along here, fellow-citizens."

There is very great importance in the public knowing what these two boards are doing or proposing to do. If it had been known by the country that the Federal Reserve Board had definitely decided to carry on its campaign of deflation begun more than a year ago, and if every daily paper in the country had announced that fact, the public would have been awake to the seriousness of the situation, which might perhaps have made things so hot as to bring about a change of the Federal Reserve Board's plan. It was left for the MANUFACTURERS RECORD alone, so far as we know, to ceaselessly fight the proposed action of the Federal Reserve Board. Had every other paper in the country known the facts as we knew them, great good would have been accomplished and millions of men would not now be walking the streets looking for work.

If before any decision by the Interstate Commerce Commission or the Federal Reserve Board could be made the public had the opportunity of hearing what was going on, it could make its fight before any decision had been reached. We believe therefore, that open meetings of these two Boards are essential to the safety of the country.

Imagine for one moment what would happen if every session of Congress was secret and no one knew what subject was being debated, what action was being taken or who voted this way or that! And yet the actions of the Federal Reserve Board and the Interstate Commerce Commission are fraught with greater consequence to the country for good or evil than the action of Congress itself, except in very rare cases. Congress committed to these organizations powers far greater than it exercises itself, and yet these two autocratic bureaus hold their meetings in secret, make decisions which are vital to the very life of the country and no one knows what these decisions are until the lightning strikes, and then, as in the case of the Federal Reserve Board, nobody knew whether their deflation policy would continue until the end of prosperity, as it has, or whether the seven men having this terrific autocratic power would have the financial judgment and the moral backbone to reverse themselves or not. If it had been known that these questions were under discussion in the Board, if every speech on the subject had been reported by the daily papers and the votes recorded, the country would have known better how to act.

It is incomprehensible that these two Boards, holding such tremendous power for weal or woe in this country and the world, are allowed to carry on their meetings and reach their decisions without the public having any knowledge of what is going on. No Congress which adopted such methods could live a week.

We insist that open meetings with "open covenants openly arrived at" should be the order of the day with the Federal Reserve Board and the Interstate Commerce Commission.

SOME BLUNDERS OF A BALTIMORE BANKING HOUSE.

MESSRS. NELSON, COOK & CO., bankers of Baltimore, who seem always eager to find some opportunity to criticise the MANUFACTURERS RECORD, take issue with us for some statements made in regard to deflation. They say in a recent weekly circular, "in compliance with the good advice of the financial interests, deflation has been gradual and has reached a point where recuperation and recovery may be expected." If deflation has been gradual, may heaven save us from anything that is abrupt. **This deflation, according to Nelson, Cook & Co., was brought about by the financial interests** to prevent a panic which they say would have shaken the foundations of our financial and commercial interests, and it was not, they say, "intended to lessen activity and to break down prices and wages." We happen to know that a great many bankers definitely determined to try to break down wages and to break down prices, and that Secretary Houston had this in mind when the Federal Reserve Board began its campaign for the breaking down of prices. We also have the word of President Wilson in August, 1919, given to the railroad brotherhoods, that the Administration would do all in its power to break down the high cost of living, which meant, of course, to break down prices. President Wilson knew, of course, that there was no possible way to break down the cost of living except by breaking down prices of agricultural products. He did not have in his mind, so far as there is any possibility of judging, any thought whatever that he was trying to save the country from a panic, but he did have in mind, according to his own statement, a definite determination to break down prices. The Federal Reserve Board very promptly joined in the campaign to break down prices.

President Wilson and the Board, or the controlling members of it, were apparently laboring under the delusion that to break down prices of farm products would lessen the cost of living, and that this would give them political power in the coming election by making the city consumers feel that they were getting lower prices and would therefore vote for the Administration. As a political game, pure and simple, it was playing politics of the rottenest kind, apparently not realizing that the farmers would have something to say about the matter and that in breaking down prices there would be a collapse in business which would bring about practical chaos, the condition in which we are now living. These men also apparently ignored the danger of the bolshevistic spirit which is abroad in the world, and which will not brook the deflation of credit.

The farmers of the country know full well that by reducing by one-half the price of their products the burden of our indebtedness has been doubled; they know that it will take twice as much cotton and wheat and corn to carry the burden of \$25,000,000,000 bonded indebtedness as it would have taken under the high prices prevailing when the bonds were sold; they know that there is not a scintilla of honor or honesty in a campaign which was planned for this purpose, or else there is a woeful lack of sense. They know that there were two ways of handling the inflation, due to the war. One was to encourage production until production overtook the demand and brought about an actual decline in prices, and that during that period everybody could have adjusted themselves and the country have been saved from the disasters of the present. They knew that the other plan was to bring about a drastic deflation such as has been carried out by the Federal Reserve Board, and under the direction of the League of Nations, by international bankers, for we published the statement some months ago that the League of Nations was carrying on a drastic deflation of credit campaign throughout the world.

Messrs. Nelson, Cook & Co. say that "we notice that the

MANUFACTURERS RECORD does not refer to its advice to producers not to sell their crops at the then prevailing prices. The advice of the banks was to sell and reduce liabilities in preparation for the inevitable decline from prices which were produced by the inflation of credits and currency incident to the exigencies of the war. The advice of the MANUFACTURERS RECORD to the banks was more inflation, increased loans, and to the producers to hold on to their products with a view of obtaining higher prices."

"Which was the better advice may be determined by those who followed the advice of the banks or the MANUFACTURERS RECORD."

In a reply to this it might be very appropriate to ask Nelson, Cook & Co. if, as bankers, they have ever advised their clients to buy stocks which afterwards declined in value; has their advice, as investment bankers, been so absolutely correct that none of their customers have ever lost money by following their advice as to the securities to be purchased? When they answer that question with entire frankness it might be time enough to answer their question to the MANUFACTURERS RECORD. But we will not wait for their answer. The MANUFACTURERS RECORD knew that the world needed every bale of cotton and every bushel of wheat which had been raised, and it knew that every bale of cotton and every bushel of wheat which were thrown upon a falling market would only intensify the decline. If all producers of cotton and wheat had followed the advice of the MANUFACTURERS RECORD and withheld their products from the market, the consumers would necessarily have had to pay the higher prices. The MANUFACTURERS RECORD cannot overcome the combined power of the United States Government, the Treasury Department and the seven men in the Federal Reserve Board, who have greater autocratic power than any other seven men on earth, when these men are all locked together for the definite purpose of carrying out a program for the breaking down of prices.

A man's house may be a good piece of property, and he may be justly advised not to sell it below its intrinsic value; but if burglars come along and set fire to it and destroy it, that is no proof that the advice given to keep his house was not wise and proper. The Treasury Department, the bankers of the country and, we imagine, Nelson, Cook & Co. advised the country to buy Liberty bonds on the pledge of the banks and of the Government that the banks would carry these bonds until they could be paid for out of savings. Scarcely was the war over before the Federal Reserve Board violated every pledge that it and the bankers and the Government had made, and required that the banks should call loans on Government bonds. In this way the selling price of the bonds was forced down so that every man who held the nation's sacred honor, in the shape of a bond, found that the nation's honor did not count for much. Under the Federal Reserve Board's dominating power, the prices of Government bonds declined from 10 to 15 points below the price at which they had been sold. Millions of people who had never bought bonds were persuaded by the bankers, and we expect by Nelson, Cook & Co., in part, to invest in these bonds. They knew nothing about credits or the ups and downs of securities. In their boundless patriotism they accepted the word of the Government and the banks and bankers, only to find that this word was broken and that their securities were forced to a price which netted them a heavy loss. While breaking down the price with one hand, the Treasury Department, with the other hand, was buying in these bonds and boasting that it had bought about two billion dollars at a very much lower price than the cost to the buyers.

A few years ago the writer knew a wealthy real estate operator in the West who was a keen buyer. He made the best possible bargain in purchasing real estate, giving deferred payment notes for as large a proportion of the purchase price as he could possibly persuade the seller to take,

No sooner had the transaction been completed and the deed recorded than he would then offer to shave his own notes, and he usually got them at a considerable discount because of the need of the seller for ready money. No one, so far as we ever learned, ever thought of him in these transactions other than as a miserly skinflint, who utilized his power to shave his own notes; but he was angelic in character and worthy of the highest commendation in comparison with the work of the Federal Reserve Board and the United States Treasury Department, acting in unison. Shylock would have been so heartily ashamed of himself, if he had been caught in such a transaction as that of the Federal Reserve Board and Secretary Houston, that he would forever have been abashed, and it would have taken a Shakespeare to express his chagrin that he had been found guilty of such a transaction. But Secretary Houston boasted of it.

Governor Harding of the Federal Reserve Board, in testifying before the congressional committee, admitted that the credit situation had gotten beyond their control in September. They thought that they could play with fire, or frighten the owner of the house, and yet stop at any point which suited their convenience. The MANUFACTURERS RECORD knew that if they once started the fire the house would be destroyed. It was for this reason that we ceaselessly warned the country and the Federal Reserve Board against what was inevitable. Messrs. Nelson, Cook & Co. want to know whether the advice of the banks or the advice of the MANUFACTURERS RECORD was the better. Their honesty will compel them to admit that for more than a year the MANUFACTURERS RECORD, week after week, told its readers that if the Federal Reserve Board carried out its policies the inevitable result would be a breakdown in the price of farm products and chaos in business. No reader of the MANUFACTURERS RECORD was ever left in doubt on that subject.

We wonder if Nelson, Cook & Co., during the last 12 months, ceaselessly advised their clients to sell every security they had as rapidly as possible because of the inevitable decline in securities if the Federal Reserve Board continued its policy? We shall be glad to have their answer.

ENORMOUS REVENUE WHICH CHECK-OFF SYSTEM YIELDS IN COAL INDUSTRY ALONE.

INTERESTING figures which illustrate the amount of money annually contributed by the coal-consuming public, which is the nation, toward the maintenance of the miners' union have been furnished by the West Virginia Mining News. These figures are based upon an examination of the payrolls of coal companies in several States.

Where part of the money paid by the nation in this form of taxation goes immediately is shown; where this money finally goes certain anti-open-shop manifestations in various quarters might possibly, upon investigation, more clearly reveal.

It will be remembered that there is, as part of the agreement made between the miners' union and the operators of the coal mines, a plan known as the "check-off," under which the companies must hold back or check off a proportion of the wages due the miners, which check-off is paid by the company directly to the union.

Union leaders claim that there are 450,000 members of their organization among the coal miners. During 1920 the average annual check-off, according to the West Virginia Mining News, was between \$70 and \$80 per man, or about \$75 per member of the union. It will be seen, therefore, that the public paid into the union coffers during the last year through the medium of the check-off system the not altogether negligible total of approximately \$33,750,000.

In commenting upon this public tax for the support of unionism the West Virginia Mining News says:

"The State of West Virginia alone cares for the public wants of more than 1,500,000 people with an expenditure of less than this—far less—and very few miners pay anything into the State treasury. Indeed, few pay taxes anywhere, but all of them pay their union dues. They are compelled to. In other words, we see growing up in this country an organization levying and collecting taxes where the State governments and the national Government cannot—a tax on jobs, and the funds thus collected used to make war upon those who will not join the union, first, and then upon all who give employment. And to these tax-gathering, autocratic union officials the public must look for coal, must pay their salaries, and pay for their semi-military campaigns against non-union miners—must pay the costs of their efforts to seize the property of the country."

"Let the American people begin thinking!"

AMERICAN AGRICULTURE MUST AND CAN BE SAVED.

THE retiring Secretary of Agriculture, Mr. E. T. Meredith, is quoted as declaring that the \$5,000,000,000 which, at a conservative estimate, the farmers of the country have lost as a result of the trade slump, combined with the heavy cost of transportation, has created such discouragement in agricultural sections that the outlook is exceedingly dubious. Recent surveys by his department show, he says, that the country is consuming the largest volume of foreign-grown foodstuffs in its history, and that the value of the foreign imports of food greatly exceeds the value of exports from the farm. The substitution of the native American farmer by a peasant type from Europe, he asserts, must mean a deterioration in the quality of food and higher prices of supplies for the consumer. There is danger that within 15 years the country will reach the point where it will have to depend upon foreign countries for its principal supply of food.

Mr. Meredith argues for a permanent agricultural policy, which will reduce the hazards of farming and make profits in food production more certain. He does not say what this policy should be. A United States Senator, admitting all the facts and the argument, says that there is no answer—that agriculture, except by peons and serfs, is doomed in the United States. Not so easily will most Americans throw up their hands. The rock on which great empires have split and world-dominating nations sunk into nothingness is avoidable. It can be passed in safety, but only if the industrialism of the cities is broadminded enough to sanction for the farms that degree of protection which is essential for their prosperity.

What do nations mean when they ask for territories to exploit? They mean, nine times out of ten, getting particular trade rights in a backward country that is simple enough to engage in the production of raw materials only, buying from the exploiting country all manufactured articles. A country that is a purely agricultural country is a country fit for exploitation. Why, then, should any sensible people insist on remaining in such an exploitable condition instead of taking thought to become self-containing and self-sustaining? We know of no more mad economic policy than that taught the South, namely, that it should be content to raise cotton and spend its political force in advocacy of a policy to permit free entry of manufactured products. It is a poverty-making and prosperity-killing attitude. It is a good thing for the South that, despite its own opposition, the vicissitudes of politics have forced it at times to accept some form of protection, which has permitted the development of great textile districts and industrial centers.

The exploitation of backward countries for the procurement of cheap foods and raw materials is now proceeding apace. The very life blood is being sucked from the American farm in the process. The farmer is facing bankruptcy because a negligent Government, having first deflated him into virtual

financial helplessness, has then thrown him into competition with the cheapest human labor that there is on earth. This is hailed by ignorant and stupid leaders as a great achievement. They point with pride instead of shame to the fact that they have driven prices down—driven them down dishonestly below cost of production. That, they say, is a great achievement, certain to be appreciated by city dwellers. But we say that these men have been engaged in a damnable proceeding, a havoc-spreading enterprise, and unless their errors are speedily corrected, in sorrow and in weeping this nation shall pay the cost.

We glory in the fact that no decent American can live on the wages or endure under the living conditions existing in Africa and the Orient. The nation can afford to erect barriers that will assure the prosperity of domestic agriculture if only as a measure of preparedness, a form of national defense. In the vast reaches of the country, where towering buildings do not hide the sky and Providence envelops with the majesty of nature's miracles the tiller of the land; where faith leaps up to greet the heavens and holds communion with the visible forms of Omnipotence; where true patriotism clothes the homes and thrills the hearts of men, there is the soul, the hope of America. Destroy that vast army of citizenship, or substitute for it a low type of peon life, and the form of government we have given to the world will totle into the yawning abyss. That is one great truth, at least, that history with awful sureness teaches.

Mr. Meredith is right. American agriculture must be saved.

TWO CLASSES INVITED TO FIGHT THE VOLSTEAD ACT.

THE organization which calls itself "The Association Against the Prohibition Amendment" is endeavoring to secure as many signatures as possible for the repeal of the Volstead Act. In its most recent advertising it states that the dues are only one dollar per year, and adds "you do not have to work, just enroll and be counted." Sounds something like the way the devil tempts his followers. And to this it adds "Your name will not be made public without your consent, but we will see the candidates and political leaders know how many citizens enroll against the Volstead Law."

This is an invitation to all the cowards who are afraid to come out in the open and let their names be known as signers of a petition for the repeal of the Volstead Law. Evidently this organization has found that many Baltimore men who we have been compelled to criticise with great freedom because they signed a statement to the effect that this nation is "becoming a nation of liars, sneaks and hypocrites," are slightly disturbed to find that by signing such a statement as that they necessarily classed themselves under that designation, or else took the ground that they were not citizens of this country. This organization now wants to get the benefit of the names and the incidental dollar connected therewith from any coward who is afraid to have his name published in order that an effort may be made to show the Congressmen a great array of names of two classes:

First—Those who have the courage of their convictions to say that they and the rest of the country are "becoming a nation of liars, sneaks and hypocrites," and

Second—The other class who want to add the weight of their names to the list of signers, but are too cowardly to permit their names to be published.

Surely the organization is one which all decent men should regard with disfavor and to which they should refuse to lend the weight of their names if they have any respect for truth and honor and patriotism, whether their names are to be published or whether they are to be held as secret.

FEDERAL RESERVE BOARD'S RESPONSIBILITY FOR PRESENT CHAOTIC CONDITIONS.

LAST year Governor Harding of the Federal Reserve Board and other bankers and so-called political economists who professed to know what was the matter with the world said the chief trouble was underproduction. The world's ills, they said, could only be healed by increased efficiency on the part of labor and increased production. Comptroller of the Currency John Skelton Williams in July of last year commended with enthusiasm the deflation policy of the Federal Reserve Board as having brought about decreased production of nonessentials and increased the production of essential things. He, too, like most men who wrote or spoke on the subject, insisted upon increased production. More and more production, said they, must be the solution of our troubles.

The MANUFACTURERS RECORD also urged increased efficiency and greater production, and that theory would have been entirely correct provided—and here is where comes in the difference between the viewpoint of the MANUFACTURERS RECORD and Governor Harding and his associates—the financial management of the country was such as to furnish a basis for increased production. But while the Federal Reserve Board people were clamoring for increased production they were cutting the throat of business, withholding the clay even from the brickmakers, who had no straw, though still demanding increased production. They were cutting down credit, and upon credit alone could increased production be based.

Imagine, for instance, what would be the situation at present if all the industries of the country had continued at full tilt during the last six months, piling up vast stocks of cotton goods and iron and steel and machinery, without any credit facilities for carrying these products, which the merchants would not take because the deflation of credit was heralded abroad and made it impossible for the goods to be sold. Increased production with decreased credit facilities would have brought greater chaos than we have. Every man who, knowing the definite determined policy of the Federal Reserve Board to deflate credit and wages and prices, must have lacked something which most men are supposed to have if they kept on urging increased production.

The farmers were berated for not working harder than they did last year, and they were told that there must be increased production; but suppose we had raised more cotton and more corn and more wheat, prices would only have been driven down still lower and the poverty of the farmer would be that much greater. Millions of them are today practically bankrupt through the deflation policy of the Federal Reserve Board; but if they had trebled their production, many millions more would be bankrupt. The two theories do not run in parallel lines. Increased production could only come through increased credit facilities; the veriest tyro in finance or business could not know otherwise than that; but the Federal Reserve Board said we must have increased production on decreased credit. The daughter who was told she might learn to swim, but must not go near the water, had a teacher of infinite wisdom as compared with the wisdom of those in authority who preached increased production and coincident therewith preached and practiced deflation of credit.

What a wonderful increase in production we have had in bankruptcies and in suicides, of bank failures, of unemployment, of poverty and sorrow and suffering everywhere! And this is the only increased production which has come about through the work of the Federal Reserve Board and of Secretary Houston in their campaign of seeking to break down prosperity. Woe and sorrow and wretchedness have followed in the trail of their work.

Notwithstanding this situation, the Federal Reserve Board is carrying on a great propaganda with a seeming intent of

deceiving the public. Its agents are going up and down the land praising its work and claiming that it has been a power to save us from a panic, when, as a matter of fact, the entire country has been living in a panic for the last six months—a panic which has caused greater losses many times over than any panic which the country has ever before faced.

\$14,000,000 IN ONE WEEK FOR CONTRACTS LET AND TO BE AWARDED FOR SOUTHERN CONSTRUCTION.

CONSTRUCTION activity in many different lines is forging ahead rapidly in the South. During the week ended February 25 announcements were made in the MANUFACTURERS RECORD of miscellaneous construction activities for which contracts were awarded and new projects for which contracts will be awarded shortly involving the expenditure of approximately \$14,000,000. Contracts were awarded for projects of all kinds to cost approximately \$4,412,254, compared with the previous week, when the total was \$5,380,000. Those new projects for which contracts will be awarded within the next few weeks will necessitate an expenditure in the neighborhood of \$9,700,000, whereas the summary of the previous week for such items involves a total of about \$5,800,000. Compared with the report of the previous week these figures show a much greater variety and number of projects over a wider territory.

During the five-day period ended February 18 the contracts awarded included many big projects costing from \$200,000 to \$2,000,000 each, while during the past week the largest single item reported under contracts awarded was under \$500,000. Contracts awarded for roads, paving and bridge construction increased from \$420,910 to \$1,967,136, and apartment-houses and hotels from \$480,000 to \$730,500, while dwellings increased from \$302,100 to \$364,700.

Similarly definite progress is indicated by comparing the summary of items from the construction department columns of the MANUFACTURERS RECORD for the month of February with that for January. In practically every line there was an advance noted in the amount of money involved in the various classifications. During January the total number of items of all kinds reported amounted to 3576, as compared with 4143 reported during last month.

The sale of lumber of Southern Pine Association mills continues good and production is slowly but steadily increasing. The average order per mill for the week ended February 18 amounted to 456,114 feet, compared with 421,308 feet for the preceding week, while average production amounted to 457,468 feet, compared with an average of 463,295 for the week ended February 11.

During January reports indicate that in 52 Southern cities building permits issued for construction of all kinds represented a total investment of approximately \$12,562,861. Detailed reports covering the various classifications of structures indicate that dwellings, apartment-houses and hotels claim a major part of the total amount of money involved, while church building, schoolhouse and bank buildings are prominent also by reason of their number and the amount of money necessary for their erection.

CAN THE BOLSHEVIKI ABOLISH FOOD?

THE Bolsheviks have abolished money; they have abolished matrimony. There is one thing they have abolished also, and it is about to involve them in everlasting ruin; that is food.

\$10,000,000 in Building Construction at Richmond

MANY NEW STRUCTURES ACTUALLY UNDER WAY AND OTHERS CONTEMPLATED FOR IMMEDIATE FUTURE—AN INSPIRING STORY OF BUILDING PROGRESS.

[Special Correspondence Manufacturers Record.]

Richmond, Va., February 28.

Construction work of various kinds involving the expenditure of more than \$10,000,000 is now under way or will shortly be started here. The number of new projects is growing rapidly, as indicated by the number of building permits applied for during February, reaching a total expenditure in the neighborhood of \$700,000 as compared with the preceding month's total of \$322,495.

Up to February 23 a total of 49 permits had been issued for work of all kinds, involving the expenditure of \$539,000, and on that day requests for building permits for new structures costing \$286,000 were in the office of the building inspector, including an apartment-house to cost \$170,000, eight brick dwellings to cost \$56,000, and one manufacturing plant costing \$60,000. Reports of the office for the year 1920 show that although 858 permits were issued for work to cost \$4,788,756, the completed work for new structures amounted to an expenditure estimated at \$2,461,668, covering 670 permits, while that not completed amounted to \$2,327,088, covering 188 permits. Similarly, repair work completed amounted to \$1,141,954 for 1014 permits, and that not completed to \$988,568 for 160 permits. Thus, construction work of all kinds authorized during 1920 remains to be completed at a total cost of \$3,315,656. During January 93 permits were issued for construction work of all kinds to cost \$322,495, and the February total will be in the neighborhood of \$700,000.

In and about the city many houses are going up, new stores and other business houses are being erected, and established ones remodeled and repaired at large cost; office and bank buildings are being constructed in large numbers, and miscellaneous buildings of many kinds are under way—the activity being widespread and diversified. Many warehouses, several theaters and two schools were included in permits issued during 1920, and those buildings that have not been completed are now being pushed forward to completion. In addition to the large amount of new construction for which permits were issued during 1920, there was a large carry-over of uncompleted projects from 1919 owing to the great difficulty in getting building materials and labor conditions. Similarly during the early part of 1920 actual construction work proceeded slowly because of the same conditions. Hence, the work that is now getting under way and that uncompleted from projects previously started is proceeding with renewed vigor and promises to increase as the summer months draw near.

Included in the work now under way is the construction at the Allen & Ginter branch of the Liggett & Myers Tobacco Co. of additions to the cigarette manufacturing plant, of steel reinforced concrete and brick construction, which will, when completed, cost approximately \$1,750,000. This factory will ultimately take in the entire square bounded by 6th and 7th streets, and Canal and Cary streets. It is being erected by the H. K. Ferguson Company of Cleveland, O., after plans by Francisco & Jacobus of New York city. The first unit is complete, and the machinery is being installed. Work on the foundations for the second unit is progressing rapidly.

The new \$1,500,000 structure for the Federal Reserve Bank of the Fifth District is fast nearing completion, and foundations are being prepared for the annex, which will cost approximately \$600,000 and be connected to the main building by a tunnel and overhead bridge. The main structure will house the administrative offices, and is of six stories with a basement and subbasement, and built of steel and stone. The annex is of the same type of construction, located at 8th and Franklin streets, while the main building is at 9th and Franklin streets. Work on the main structure was started about a year ago, and the building will be ready for occupancy within a month. Plans for the annex building were prepared by Carnal & Johnston of Richmond, while those for the main structure were prepared by Sill, Buckler & Fenhamen of Baltimore. The general contract for both structures is held by John T. Wilson Company of this city.

Within the next 30 days the new 3-story stone and steel struc-

ture for the Virginia Trust Co., now being erected on Main street between 8th and 9th streets, will be completed at a cost of \$350,000 and ready for occupancy. It is constructed by the John T. Wilson Company. Plans were prepared under the direction of Alfred C. Bossom of New York, and Carnal & Johnston.

Similarly a 5-story brick office building, at Bank and 12th streets, is being completed by Davis Bros., Inc. of this city. Carnal & Johnston of Richmond were the architects. This building involves an expenditure of about \$60,000.

Extensive additions at a cost of \$100,000 are being made to the local plant of Kingan & Company, packers. The work includes a lardhouse, tankhouses, boiler-room, several small auxiliary buildings and a general shop building, being constructed at the Hermitage road plant after plans prepared by Carnal & Johnston. John T. Wilson Company is the general contractor.

Contract has been awarded for a freight station for the Richmond, Fredericksburg and Potomac Railroad, which will be a one-story structure of brick and steel, 70x250 feet, costing about \$75,000. Plans were prepared by Harrison & Broads, local architects, and John T. Wilson Company has the general contract.

The Advance Realty Corporation has awarded the contract for the construction of a 3-story garage, of mill type construction, to cost \$50,000, at Board street near Lombardy. Excavation has begun and the building will be completed in from three to four months' time.

L. T. Christian, owner, has just awarded contract for the construction of a modern funeral parlor establishment to cost approximately \$65,000, and work has already begun by the general contractors, Jas. Fox & Sons. This building will be 17x130 feet, and three stories high, of brick, with slate roof and having hot-water heat. The architect was Charles M. Robinson.

Elizabeth V. Lee has awarded contract to W. E. Purcell, Jr., for the construction of an apartment-house which will cost \$100,000. It will be of brick construction, 64x57 feet, four stories high, and have rooms for 12 families and heated by steam. Plans for the building were prepared by B. J. Rowlett.

On the outskirts of the city there is being constructed for the Richmond branch of the Virginia-Carolina Chemical Co. extensive additions and improvements to the present plant at a cost of several hundred thousand dollars. The principal building is a one-story structure of steel and concrete construction, 800 feet long and about 100 feet wide, and it will probably be completed within the next 60 days. Plans were prepared by the company's engineers and architects, and the general contractor is John T. Wilson Company.

A modern reinforced concrete and steel building, five stories high, with basement, is fast nearing completion at 21st and Cary streets, for Larus & Bro. Company, tobacco manufacturers, by John T. Wilson Company, work on this building having been started about a year ago. The new building, which is 110x176 feet, will cost approximately \$400,000. Plans for it were prepared by J. E. Sirrine, architects-engineers, of Greenville, S. C., and also Carnal & Johnston, local architects.

A three-story addition and extensive improvements and alterations to the building of the Planters National Bank, 12th and Main streets, has been completed by John T. Wilson Company at a cost of about \$300,000. Alfred C. Bossom of New York city was the architect.

Contract has been awarded for the construction of a church building, sunday-school room and recreation quarters for Broad Street Methodist Episcopal Church, which, when completed, will involve an expenditure of more than \$200,000. Work has already begun on razing several brick dwellings located nearby. The new building will be 130x128 feet, of stone, brick and steel construction, with a slate roof and wood floors. Benton & Benton are the architects, and the general contract has been awarded Davis Bros., Inc.

Work on the building and Sunday-school room for St. John's

Lutheran Church, being erected at a cost of about \$200,000, is progressing at a good rate, and is now about 60 per cent. complete. This work is being done by Jas. Fox & Sons of Richmond, after plans prepared by Max. E. Ruehrmund, local architect and engineer.

The Sacred Heart School building being erected by the Allport Construction Co. is entirely enclosed now and ready for plastering and interior finishing. It is a fireproof structure, two stories high, with a basement, and about 85x105 feet. It will probably be complete and ready for occupation within 60 days. Carneal & Johnston were the architects.

Max. E. Ruehrmund plans the erection of an apartment-house to cost about \$170,000 on 4th street between Franklin and Main streets. It is to be a modern type structure, four stories high, and 44x150 feet.

Davis Bros., Inc., plan the erection of an apartment-house to cost in the neighborhood of \$160,000, to be built of brick and concrete, with a slate and slag roof, and heated by steam. L. Otis Spiers is the architect. The same firm and other persons have plans also for eight modern brick dwellings which will cost about \$56,000, and the same firm drew the plans as for the apartment-house. The work will be undertaken by the owners.

Despite the general slump during the latter part of 1920, the year's business in the city was equal to or even superior to the boom year of 1919, according to F. M. Runnels, assistant business manager of the Chamber of Commerce. In speaking of the general situation, Mr. Runnels said: "Practically all of the houses being erected in the city now are either brick or stucco—there are few frame dwellings under construction. Most of them average about \$7000 each and are complete in every detail, and contain many of the improvements found a few years ago only in homes costing \$25,000 and more. There is absolutely nothing temporary or superficial about the development of the city during the past two years or that will be done in the near future. Richmond is solid as a stone wall."

Continuing, Mr. Runnels said: "In 1919 our jobbing business amounted to \$150,359,722, and in 1920 to \$151,301,229, while the increased investments in 1920 in jobbing business over the previous year amounted to about \$1,000,000, and over \$2,000,000 more in the sale of manufactured products."

In order to stimulate buying and to feature particularly the products manufactured in and about Richmond, a big exhibition was held in Gray's Armory during the past week, at which 73 out of a total of 208 manufacturing plants in the city had exhibits. Thousands of persons attended the exhibition, and much interest was manifested in the display which was planned by the Chamber of Commerce. In addition, hundreds of farmers from the surrounding territory attended.

A major portion of the construction work in the city is being undertaken by local firms, and hundreds of persons are engaged in the work. A large part of the building material is also supplied locally. The building campaign that is now under way promises to assume big proportions, and is resulting in a definite stimulus to many varied interests throughout the city.

Electric Power Plant to Cost \$750,000.

Monterey, Mexico, February 18—[Special.]—Plans have been adopted by the Dolores Mines Co., an American corporation, to construct a large electric-power plant at Madera, State of Chihuahua, and to build an ore-reduction mill at Dolores, in the same State. The proposed improvements will cost approximately \$750,000, American money, it is stated. The company owns and operates a group of rich gold and silver mines in the Guerrero district of Chihuahua. It recently completed the construction of a modern automobile and wagon road between Dolores and Madera.

Wyoming Repeals Carbon-Black Law.

Casper, Wyo., February 28—[Special.]—The Wyoming Legislature has repealed the carbon-black law that has been in force for a year. This measure stopped the use of natural gas in the manufacture of carbon black, and was intended to conserve that product.

ATLANTA'S \$8,850,000 BOND PROJECT.

Would Build New Schools, Improve Water-Works, Provide Viaduct and Give the City a Modern Sewage System.

Atlanta, Ga., February 26—[Special.]—A better organized, more earnest effort to carry successfully through the city's polls a municipal bond issue has never been put forth in Atlanta than the campaign now being waged in behalf of the \$8,850,000 project which will be voted upon March 8.

Practically every organization of any influence whatsoever has gone on record favoring the issue. These endorsing bodies are of both races and both sexes, the women of Atlanta being especially active because the adoption of the plan means better schools.

There are four phases of the proposed issue, which may be voted upon separately or as a whole, and all have to do with far-reaching civic improvement. They are:

To build a viaduct connecting the plaza of Terminal Station with Spring street, to relieve the present congestion in the heart of the city. Under circumstances as they now are, Atlanta's traffic concentrates in the very heart of the city. Now Spring street, a newly paved, broad thoroughfare, opens another artery from the Peachtree section, but stops short at the railroad tracks, which sever the city's middle. A viaduct would span the tracks and complete the Spring-street artery. The estimated cost of this viaduct is \$750,000.

To improve the water-works. At present Atlanta operates on practically the same water system as was originally constructed to accommodate a city of 65,000. The river pumping station, which lifts Atlanta's supply to the storage reservoir, is old, inefficient and expensive to operate. Maximum capacity of the mains to bring water from the river is 33,000,000 gallons every 24 hours, and last summer consumption was 38,000,000 gallons every 24 hours. At the present time there are many parts of the city without connections, and consequently they lack sewage facilities and fire protection. Under the terms of the bond issue \$2,850,000 would be used to improve the water-works.

To give Atlanta a proper sewage system. Atlanta is peculiarly located on the top of a plateau, and consequently there can be no trunk-line sewer system, but there must be a number of small trunk-line outlets, draining down the four slopes. At present the lateral and main line sewers are not properly connected, the disposal plants need repair and enlargement, and in the sections which have no connections are 3000 surface closets. To correct this condition \$1,250,000 will be needed.

Schools, their improvement, expansion and maintenance, constitute one of the most imperative items of the bond issue program. To build badly needed new schools and to make many of the old ones tenable it is estimated that \$4,000,000 will be required. Conditions of both white and negro schools are deplorable. None are equipped with fire-escapes or sprinkler systems, and they are not nearly large enough to provide proper educational facilities. Children are obliged to attend in shifts to get into classes at all. The high schools are in scarcely any better shape. The bond issue would provide a comfortable seat in a well-lighted room in single sessions for every child of school age in the city of both races.

Additions to Hydro-electric Plants and Transmission Lines.

Guanajuato, Mexico, February 19—[Special.]—Important improvements and additions are to be made to the hydro-electric plants and power-transmission system of the Guanajuato Light & Power Co., according to statements made here. This company has been supplying electric power for the mines and ore-reduction mills of the Guanajuato district for many years. Its transmission lines also extend to industrial centers throughout the States of Guanajuato and Jalisco. It plans to increase the capacity of its hydro-electric plants and to extend its transmission lines to other mining districts and industrial centers.

The North Carolina Department of Agriculture has issued its biennial report, which contains, in addition to other crop statistics, a comparison of the agricultural condition of the State in 1910, as shown by the census of that year, with the year 1920.

Kingsport—An Industrial City Builded on a Foundation of Sound Practical Ideals

A REMARKABLE DEVELOPMENT CARRIED OUT ON THE MOST MODERN AND PROGRESSIVE LINES—A CENTER OF INDUSTRY WITH EVERY PROVISION FOR THE HEALTH, COMFORT, EDUCATIONAL ADVANCEMENT AND GENERAL WELFARE OF THOSE EMPLOYED IN THE PLANTS—FULFILLMENT OF THE PLAN A STRIKING EXAMPLE OF BROAD VISION, COMBINED WITH KEEN BUSINESS JUDGMENT.

By WM. H. STONE, Editorial Staff Manufacturers Record.

Kingsport, Tenn., February 26.

Kingsport, the remarkably thriving industrial city of East Tennessee, is the result of definite and carefully prearranged plans to create a center of industry that would embody in its ultimate achievement the most approved and practical ideas in civic government, co-ordinated industries and community spirit.

Idealistic in its conception and scope, it is true, but made practical by discarding the theoretical, untried ideas of the idealist and the adoption of practical, common sense, proven methods that have worked out with remarkable success and won for this undertaking a national reputation as an outstanding example of what can be done when conceived in the unselfish spirit of co-operation and carried out along sound practical lines.

Kingsport is a city with a soul where the citizen recognizes his duty to others and is performing his work and conducting his life with a realization that he is a real part of the community and that its fullest measure of success can come only in so far as he himself does his part in keeping alive and healthy the community spirit that is the very life blood of the undertaking.

To have successfully imparted this spirit in the beginning and kept it growing and expanding as the settlement progressed will ever be to the credit of those who conceived the idea and the men who have had immediate charge of translating it into actual being.

Kingsport is no longer an experiment. It is over seven years old. Its value as an industrial location has been proven. The practicability of building and conducting an industrial community along the broad co-operative lines laid down by its creators has been established. So well have all the plans and ideas worked out that a foundation has been laid which is so strong and enduring that upon it is being builded a group of industries that have come to stay. Their coming and staying have so attracted the attention of others that several of the nation's leading business establishments have lately put important branches here, and more are coming. They are coming not alone because of the satisfactory conditions that exist in the community, but because back of it are

the advantages of varied raw materials, good transportation facilities and a location close to many of the big activities of the country.

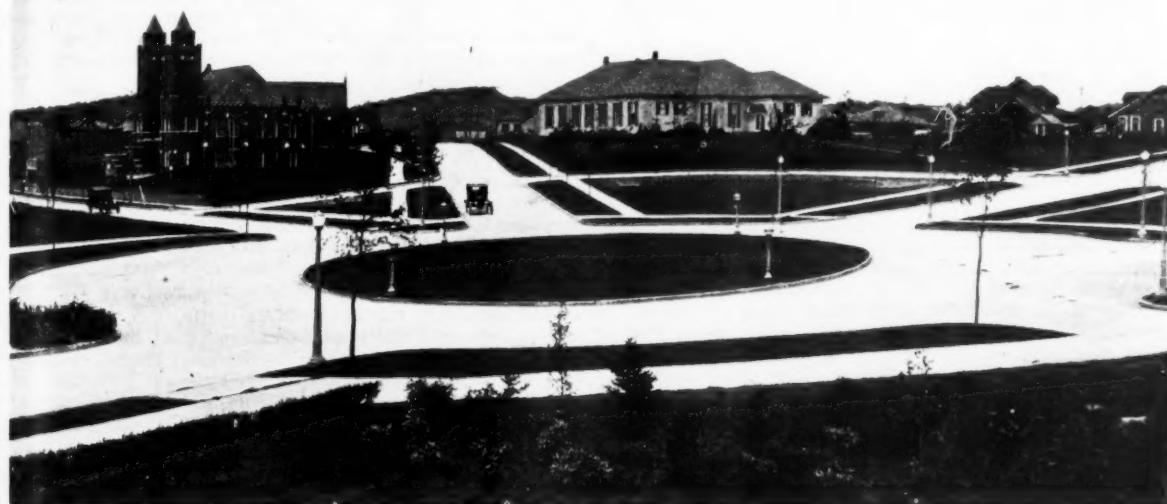
Thus is briefly summed up what has been achieved at Kingsport. But the story of achievement, while previously partly told in piecemeal, is worthy of telling in a broad review of the conception of Kingsport and the things that have been done to create an industrial community that can well be an object-lesson of what



GROUP OF THREE HOUSES OF THE "FIFTY HOUSES" GROUP. Each house is of hollow tile and stucco and contains six rooms, bath and furnace.

can be done when the proper foundation for an industrial development is laid and the plans are carried out on sane practical lines.

About 10 years ago, when the Carolina, Clinchfield & Ohio Railway was built from Dante, in the heart of the rich extensive coal fields of Southwest Virginia, to Spartanburg, S. C., it was keenly realized by the far-visioned financiers who backed the undertaking that in opening up a practically virgin area there would be vast opportunities for the development of varied dormant resources and the responsibility of guiding this development and



CIVIC CENTER OF KINGSPORT, SHOWING MODERN CONCRETE STREETS, LIGHTING EQUIPMENT, PARKING AND SHRUBBERY.



FINISHED LEATHER DEPARTMENT OF GRANT LEATHER CORPORATION. THE SMOKESTACK IN THE LEFT BACKGROUND DIVIDES WHAT MAY BE SEEN OF THE EXTRACT DEPARTMENTS ON THE LEFT AND TANNERY ON THE RIGHT.

ascertaining the character and extent of these rested upon them to see to it that it was carried out in a way that would mean ultimate success.

To one who has traveled this area while the railroad was building and at regular intervals since, the transformation has been remarkable.

In the survey of the resources of this virgin section it was realized that certain locations would have to be established where industrial communities could be placed to utilize the raw materials to best advantage. One of the sites chosen was the beautiful valley where Kingsport has been established.

It is easy for one who viewed the site some seven years ago to see why it was selected. The writer, on a visit made at that time, stood on a high hill back of the present cement mill and gazed with rapture and inspiration as the plan for the future Kingsport was unfolded. As far as the eye could see on one side was a broad, slightly rolling valley, extending to the foothills of the mountains in the distance, while on the other side was the Holston River, winding its way between rich farming lands, abundant at that

and, what is of the most significant importance, this future city was to be builded around the natives of this mountain area. Those conceiving the plan recognized their duty to the people in this new land the railroad was opening up. That upon them rested the responsibility of giving these mountain folk the opportunities of education and development that would bring out their latent abilities and cause them to become more useful and productive citizens of America and take a proper place in our national life, of which they had been deprived largely through inaccessibility, which carried with it the lack of incentive.

The whole plan was inspiring, but doubt crept into the writer's mind that such a development would ever be achieved. The doubt was engendered by the failure of similar attempts when difficulties were met and there was not sufficient patience and fortitude and faith to see them through. Such, it was claimed, would not be the case here, because it was said those behind the undertaking would see it through, as they had the financial means to do so and they knew they had the territory, the resources and the people upon which to draw to insure success.

Nevertheless, that skepticism remained in the writer's mind, and it was only driven out by visits at regular intervals since, when the marvelous achievements outlined have been seen to come to pass and all doubt has been wiped away.

Those who planned Kingsport never lost faith, and the Kingsport they planned in their dreams has indeed become all and more than they hoped for. Its position is established, and, as previously stated, so soundly that it is beyond the experimental class and occupies a place of permanency as an industrial city full of promise and still greater achievement.

In view of this success, it is timely to refer to the steady industrial growth of the community. The first plant to be located in Kingsport was the Kingsport Brick Corporation, which has steadily grown from a comparatively small industry to one of large importance, having a capacity of 130,000 brick a day and now manufacturing face and common brick, farm and sewer tile and hollow building blocks. This plant was closely followed by the Clinchfield Portland Cement Corporation, which has established a plant having a producing capacity of 4000 barrels of Portland cement daily. Since its first establishment there has been added a quick and hydrated lime plant and the Cottrell precipitation process for securing potash from the cement kiln fumes.

The Union Dye and Chemical Corporation is a development of a dye plant started here during the war period. The present company is manufacturing aniline oils, chlorine and caustic soda by the electrolytic process.

A few years ago it was realized that it would be desirable to establish a plant that would give employment to the many young women in Kingsport, and the Kingsport Hosiery Mills was established. This plant now has a capacity of 2100 dozen pairs of hose per day.

One of the unusually interesting developments that has been worked out here is that of the Grant Leather Corporation. At present constituted, this is a gradual development and amalgamation of several plants, including the Kingsport Extract Corporation and the Kingsport Tanneries, Inc. Several years ago the Simmons Hardware interests of St. Louis became interested in this undertaking and became an important part of it, with the result that a large amount of the leather goods, including harness, saddlery, etc., which the Simmons Hardware Co. sells is made at this Kingsport plant. There has just been completed a large finishing leather plant, costing approximately \$1,000,000, to manufacture these products. The tannery operated in connection with it has a



ONE OF THE TWO TYPES OF WORKMEN'S HOUSES IN THE WHITE CITY.

Developments consist of 67 cottages ranging from four to five rooms and bath.

time with crops of grain and fertile grazing fields, where thrived the sturdy cattle for which this section has ever been famous.

While at first it seemed almost a sacrilege to ever change the peaceful quietude and splendor of this beautiful valley, yet one was quick to sense its unusual advantages for an industrial center as the ideal plans for its development were explained.

As conceived, here was to be created a place that would embody the practical ideas of the best minds that could be obtained. The future city was to be laid out by a great landscape architect, and his plans were to be followed absolutely in all future development. A great water supply was to come from a nearby mountain, which could supply every demand the growing city might require. A sewerage system was to be built; public utilities established; churches, schools and civic buildings were to be erected. Fine streets were to be laid out and bordered with rows of trees and shrubbery and provided with a modern lighting system. There was to be a zoning plan so certain sections would be available for industries and business houses, and others for civic buildings and residential areas.

With all these plans for the physical construction of the town, there was to be builded in the people who came here the underlying spirit of the community—co-operation and a recognition of the social duty which every person owes to another.



BROAD STREET, LOOKING NORTH FROM C. C. & O. RAILWAY STATION.

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capacity of 500 hides daily, and the tanning extracts used in this plant are also made by one of the company's subsidiaries. Thus it will be seen that here is a combination of industries that dovetail one with another, so that instead of just finished hides leaving Kingsport, the products go out in the shape of finished leather goods.

Another interesting development is that of the Meade Fiber Co. This plant has a capacity of 70 tons of poplar pulp made by the soda process, and it uses as part of its raw material supply the spent tanning acid chips from the Grant Leather Co.'s extract plant, which is an example of a further utilization by one plant of the products or by-products of another.

This group of industries represents an effort which has been made at Kingsport to see that the products that leave this community shall be in as nearly finally finished form as possible rather than act as the raw material for other industries in various parts of the country.

There have, within the past year, come to Kingsport two industries of nation-wide reputation. These are the Southern division of the Corning Glass Works, which has just completed a \$1,000,000 plant for the manufacture of Pyrex transparent oven and chemical ware; the other is the Tennessee Eastman Corporation, which is a subsidiary of the Eastman Kodak Co. of Rochester, N. Y. This plant at present will make some of the chemicals which are used in such large quantities by the Rochester industry.

The Corning Glass Works selected Kingsport for its Southern location not only because of the facility with which raw materials could be gathered here, but because they were strongly impressed with the industrial situation and the spirit of co-operation that is manifested in Kingsport. While their new plant was under construction most of their employes were native mountain labor and mechanics under the supervision of their own special foremen. The officials of the company were so impressed with the tractability of these mountain men that they selected quite a number and sent them to Corning, so they could learn the methods and intricacies necessary to master the turning out of the Pyrex products. After these methods had been grasped these men were brought back to Kingsport, and it is the policy of the management that the plant be operated, as fully as possible, with people drawn from this mountain area. The Corning officials were quick to see the significance of the aims and hopes of those who established Kingsport, and readily fell in step with the ideas, and have cooperated fully in doing their part toward the realization of the Kingsport ideals.

The story surrounding the coming of the Eastman Kodak interests is of more than passing interest. This company had been looking for a suitable site that would be well located for the manufacture of a certain group of needed raw chemical and associated materials. In their investigations a number of experts were sent

to Kingsport to report upon the advisability of this location for the plant. It is said that the report submitted was so favorable that some higher officials of the company were asked to go down to Kingsport and check up these experts. They came back equally high in their praise. The vice-president of the company then looked over the situation, and it is said that the report of every official was so equally favorable that Mr. Geo. Eastman, the president of the company, came himself to see what manner of place Kingsport really was. Mr. Eastman is a man who has been the inspiration and leader in the wonderful community development at Rochester in connection with his big industry. He has carried out at Rochester in a practical and successful way many of the ideals to which Kingsport is aspiring. Therefore he was quick to appreciate the opportunities offered for this branch plant, and



CENTRAL HIGH SCHOOL.

became more enthusiastic than any of his experts or officials, and has worked in close harmony in the development of his industry so it would fit in with the Kingsport idea.

The Eastman Kodak Co. started out by buying the plant that was erected by the Gvovernment during the war to make wood alcohol and acetone, and the 35 acres which immediately surrounded this plant. They did not, however, confine their purchase to this original 35 acres, but have since steadily added to their holdings until they now have a location of 370 acres, which would imply some thought they have of greatly enlarging their activities at Kingsport in the future.

Perhaps no better evidence of the claims which Kingsport is making as a good location for industrial enterprises could be submitted than the coming here of these two nationally known companies, for they had investigations made of sites in all parts of the country, keeping ever in mind the things they required to make their industry function with the greatest satisfaction and efficiency. Their selection of Kingsport, therefore, carries with it unusually strong recommendations of the facilities and the resources which this city must offer as an industrial location.

These plants referred to form the backbone of Kingsport's de-

velopment industrially; others will be added from time to time. But it is safe to say that none will be encouraged to come here but those which fit in with the general scheme that has been laid out, and which, it is believed, can operate successfully in this section.

The main line of the Carolina, Clinchfield & Ohio Railway passes through the industrial section of Kingsport, and all necessary sidings and yards have been built to give these industries every advantage to facilitate the handling of their raw materials and finished products.

In preparing Kingsport for its future as an industrial township, the greatest care was devoted to planning everything far ahead by one of the eminent town planners of the country, and his



RECENTLY COMPLETED Y. M. C. A. BUILDING.
Contains gymnasium, swimming pool, bowling alleys, billiard-room, lounge, classrooms, boys' rooms and about 30 bedrooms. Will be open to members soon.

plans provided for the ultimate development of a city of 50,000 people. The zoning plan was followed so that certain places were provided for industries, for business centers, for civic buildings, churches and schools, and for various types of residential sections. These plans have been most carefully followed, and, to the credit of those in charge, no temporary structures were permitted, nor any that would not fit in with the ultimate scheme. They wisely preferred to put off the erection of a permanent structure until it could be built in keeping with the character that had been arranged for it. The result has well justified the close following of this plan, and while Kingsport has not as yet secured all of the main structures it needs or wants, it is getting them steadily, and when built they properly take their place in the general scheme of things as laid out.

The domestic water supply has been provided sufficient for 35,000 people. This soft water comes from the limestone formation of Bays Mountain, with an impounding reservoir of 265,000,000 gallons, located 700 feet above the town and seven miles away, and all watersheds are entirely protected. The water comes to Kingsport by the gravity system, and so great is its force that it has to be stepped down to permit its use. Rapid sand filtration and chlorinating devices have been established under specifications furnished by the Surgeon-General of the United States Army, with the result that the city's water supply is equal to that of any community in the country.

A sewerage system was also laid out and built prior to the development of the city, and this has been arranged in a way so that extensions can be added as needed.

These two important engineering works were undertaken under the plan and supervision of Col. F. S. Tainter of New York city.

The housing scheme followed at Kingsport is one of its great features. These have been arranged in groups to fit the requirements of the various classes of those living here. Some of the illustrations given show the types of these houses. There is the group known as the "White City," consisting of 67 workmen's houses, each having four to five rooms and bath. Every house has modern facilities, with ground around it, and they are all kept in excellent shape. Another interesting group is of hollow tile and stucco construction, these having six rooms and bath. Twenty-one residences suitable for executives were built. Likewise a group apartment-house, which is also shown in one of the illustrations.

In all of this work special attention was paid to the development along the best architectural lines. With this in view, careful attention was given to grouping the buildings, and the most convenient and livable plans were selected. Certain minimum standards were adhered to. Every house, however small, must have a full supply of closets, bathrooms, hot and cold water and other modern conveniences. Trees, shrubs and vines are provided with each house, and each newcomer is taught and guided in their care, thus keeping alive the interest of the people in this work. With each group of houses a suitable playground has been laid out.

In connection with this housing development a comprehensive plan has been perfected by which the homes are sold to worthy



GROUP OF 18 ENGLISH HOUSES ON SHELBY STREET.
Each house has six rooms, bath and all modern conveniences.

citizens at practically cost. They are given 15 years' time in which to make full payment.

These residential sections referred to are all for the white citizens, but to take care of the negro workmen 60 acres of desirable land was set aside for a village for them. This site has a natural isolation by reason of a stream, the city park and the railway. This village has been laid out with the same care as the others, and its plans provide for churches, civic center, stores and playgrounds. A splendid school has been erected, and particular attention will be given to the education of the colored children. The views shown of these various residential sections indicate that they would be a credit to any large community, and further, that



PLANT OF THE CORNING GLASS WORKS, SOUTHERN DIVISION. THIS PLANT WAS RECENTLY COMPLETED AND IS NOW IN OPERATION. "PYREX" OVEN GLASS IS MANUFACTURED.



WHITE CITY, KINGSPORT. TWENTY-TWO DISTINCT HIGH-CLASS HOUSES, IMMEDIATELY NORTH OF THE WORKMEN'S HOUSES. EACH HOUSE CONTAINS FROM SIX TO EIGHT ROOMS AND BATH. THIS PICTURE GIVES SOME CONCEPTION OF THE CHARACTER AND BEAUTY OF THE COUNTRY SURROUNDING KINGSPORT.

delightful and comfortable home features have been provided so as to make living in Kingsport filled with happiness and contentment.

As stated previously, education is one of the groundwork features of Kingsport's development. Indeed, it was the opportunity for education that has attracted many of the mountain folk to this city, and it is doubtful if any question connected with the plans for the city have received more earnest or more liberal consideration than that of the school system. The school population at this time is estimated at 1500. The system includes a high school and two primary schools, and the courses embrace a thorough system of public education up to and including all high-school courses, and special attention is given to domestic science, singing, dressmaking, agricultural chemistry and industrial chemistry. Regular evening classes are held for vocational training, the courses including many subjects to enlarge the usefulness and earning capacity of the men and women. College graduates are employed as teachers, while in general charge is a superintendent especially selected for his peculiar fitness to handle the educational program needed to achieve the results aimed for.

The church development at Kingsport has been noteworthy and expressive of the religious spirit existing in the community. Practically all the leading denominations are represented, and a number of substantial, attractive church buildings have been erected—buildings that would be a credit to the congregations of large city churches.

Those who have been responsible for Kingsport always realized that the work would not end in providing places of industry and places of residence, but that to make Kingsport the ultimate success aimed for, the community spirit and a thorough co-operation on the part of everyone must be developed. With this thought in mind they have gone quite far in developing this idea. A splendid community house has recently been completed, costing \$150,000, and the funds for this were donated by the various industries of the city. This building has been thoroughly equipped with all the advantages required, including bowling alleys, gymnasium, swimming-pool, reading-rooms, classrooms and dormitories.

Several years ago a system of group insurance was established at Kingsport, whereby every employee of the industries, as well as the municipality, is insured against death, sickness and accident

The policies range from \$500 to \$1500 life insurance, the amount varying according to length of employment, and the cost of it is borne entirely by the employers. A modern complete health bureau has been established in charge of a trained public health physician, who gives his entire time to it, and in connection with this bureau are visiting nurses, employed by the Metropolitan Life Insurance Co., and the department has full charge of examination of children in the schools, creation of public health sentiment and the control of all conditions menacing the health of the community. A medical and dental clinic has also been provided, so that the children and the people come under constant observation, which enables the health department to keep in very close touch with conditions at all times, combat the spread of contagious diseases, lower the death rate among the children, and, through educational



ABRAHAM LINCOLN SCHOOL.

There are three schools of this type now under construction, one of them, the Booker T. Washington School, being for colored children. Campaigns, teach the people the fundamental importance of civic hygiene, sanitation and the general prevention of sickness.

It is interesting to see how far the city has gone in taking care of its public park walks, and even the grounds around the homes of its people. A public landscape engineering department was established. This is in charge of Miss Lola Anderson, a graduate in landscape architecture of Cornell University, and the influence of her work is manifest in every section of the city. Splendid results are being achieved in her co-operation with the home owners in planting and cultivating those shrubs and flowers that best fit in with the conditions. Her services are extended without charge.



GENERAL VIEW OF PORTION OF PARK HILL. THIS GROUP OF HOLLOW TILE AND STUCCO COMPRISSES THE "FIFTY HOUSES."

to the residents of Kingsport, and in addition they are furnished trees and shrubs at the lowest possible cost. The scheme of reforestry work has been started and a considerable acreage planted. This work is intended especially for creating interest among the farmers in the surrounding country.

On the outskirts of the city a modern, well-built golf course has been established under the direction of A. W. Tillinghast, a golf expert from New York city, and the employees and citizens of the town are encouraged in the use of the course.

About four years ago Kingsport was incorporated under a modified form of commission charter as devised by expert legal talent and approved by the Rockefeller Foundation's Bureau of Municipal Research. Under the plan adopted political control and interference are eliminated and the city's affairs are conducted similarly to those of an industrial organization. The voters are like the stockholders, the aldermen and mayor may be compared to the board of directors and president, and the city manager to the general manager. The city manager is appointed by the board, which also has one additional appointment, that of city attorney. The mayor alone appoints the school board, and city judge, thus fixing responsibility. All other city employees are hired or discharged solely by the city manager. The advantages of this form of government are realized in many ways every day. One result has been the ability of the city to do work with its own forces and at prices as low as those obtained by corporations and individuals.

Undoubtedly the success of Kingsport's development has been due to the breadth of the vision of its organizers, an adherence to the broad plans upon which it was founded, and an abiding faith in the people and the resources of this mountain region.

In creating Kingsport, its founders set high ideals as the ultimate goal. In building Kingsport they have builded well.

THE HAVANA-KEY WEST CABLE.

Telephone Connection to Be Established Under Water a Distance of 120 Miles—Some Interesting Problems of Construction Involved.

By CHARLES D. M. COLE, First Vice-President Cuban-American Telephone & Telegraph Co.

The laying of the first telephone cable between Key West and Havana, about 120 land miles, represents a distinct advance in the art of submarine communication. It is not only the longest, but the deepest route covered. Several years of extensive study and development have been required to produce a cable system which, in spite of the great distance and the great depth of water for a telephone cable, will provide such transmission facilities that a general service can be given between points in Cuba and the Bell Telephone System.

On account of the physical conditions, it is necessary to use three cables to provide the required facilities. Each cable contains a single copper conductor loaded with an iron loading wire and insulated with guttapercha.* To protect the guttapercha from the teredo or any other destructive form of sea life, the guttapercha is wrapped around with a number of copper tapes, which are continuous from one end of the cable to the other. Surrounding the copper tapes are the jute wrappings and steel armor wires necessary to provide the required protection from mechanical injury.

To provide against the possibility of long interruptions to service due to some accident to one of the cables, a total of about 40 miles of spare cable is being provided. The three lengths of cable and the spare cable were brought over from England by the cable ship Stephan. They were stored during the voyage in large steel stanks filled with sea water to prevent the deterioration of the guttapercha from the effect of the air and climate. For the continued protection of the spare cable, a large concrete storage tank has been constructed on a pier at Key West, where the spare cable will be kept under water until such time as it will be required for use. The total weight of the three cables, including the spare cable, is approximately 3,500,000 pounds.

To procure a suitable electrical efficiency it has been necessary in the design of these cables to use much greater weights of copper than is necessary in land telephone cables, one-tenth of the weight of the cables being copper, that is, approximately 350,000 pounds. Even with this proportionately large copper

conductor, the telephone energy received at the end of the cable is only a little greater than one one-thousandth of the energy delivered to the cable at the sending end. In order that satisfactory commercial service may be given over the cables in conjunction with the land lines at the two ends, it is, therefore, necessary to employ specially designed amplifying apparatus which induces new energy into the circuit and at the same time preserves the electrical characteristics so that the voice sounds may be accurately reproduced.

Another feature of the design of these cables which is necessary to secure the desired electrical efficiency is the use of fine iron wire closely wound around the copper conductor. Approximately 23,000 miles of this wire is required.

The three cables will be laid over routes several miles apart, except at the extreme ends. This is done in order that the greatest amount of insurance may be secured from complete interruptions of service. The depth of the water where the cable will lie is as much as a mile at some points, and in going from Key West to Havana it is necessary for the cables to cross a submarine mountain range which rises approximately one-half mile in height above the ocean floor. The pressure on the cables will be enormous, it being estimated at the deepest points as over one ton per square inch.

On account of the great weight of the cables and the depth of the water in which they are to be laid, a large ship is required for the laying operations. During these operations the ship will carry at certain times, suspended in the water, more than a mile of cable. In order that the cables may be laid over the previously chosen routes, the ship must also have power enough to hold a true course, even with this cable hanging suspended in the water and subject to the pressure of ocean currents.

The cable-ship Stephan is now under English register, having been captured from the Germans during the war. In laying the land approaches of the cable, it is necessary to utilize small craft. Deep-sea cable laying will start from Havana.

The officers of the Cuban-American Telephone & Telegraph Co. are:

Hernand Behn, president; Charles D. M. Cole, first vice-president; Sosthenes Behn, second vice-president; Carlos I. Parraga, secretary; Manuel Herrera, treasurer.

Although the greatest amount of business is expected to develop between New York and Havana, it is believed also that business will develop between points in Cuba and Montreal, Chicago, St. Louis, New Orleans and other Western points.

At Key West the Cuban-American cable will connect with the long lines of the Bell system which were carried down the east coast of Florida four years ago. These lines parallel the route of the Florida East Coast Railroad, and reach Key West by means of the viaduct over which the railroad passes.

Iron and Steel Products From Belgium.

Galveston, Tex., February 28.—[Special.]—With the arrival here a few days ago of a shipment of iron and steel beams and girders from Antwerp, Belgium, there was begun what may become a large importation of these structural materials through the port of Galveston. The shipment was consigned to various dealers in structural iron and steel in Texas and other parts of the Southwest. It is stated that other large orders have been placed in Belgium. Some of the railroads of Texas also are negotiating for the purchase of steel rails in Belgium, deliveries to be made through Galveston.

Directory of Petroleum Refineries.

A complete directory of petroleum refineries in the United States has been just issued by the United States Bureau of Mines. The report, compiled by H. F. Mason, petroleum economist, states that there are 415 completed refineries in the country as compared with 373 in 1920. In addition, 44 refineries are in process of construction. The present daily capacity of all refineries is 1,888,800 barrels of oil as against a daily capacity of 1,530,565 barrels in 1920. Texas, with 70 refineries, has the largest number of plants now in operation. Copies of the report may be had by applying to the Director of the Bureau of Mines, Washington.

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\$14,000,000 Is Enormous Total of Construction Work Contracted for in South for Week Ending February 25

Construction contracts awarded and announcements concerning new work for which contracts will be awarded in the near future, as reported in the construction columns of the MANUFACTURERS RECORD for the week ending February 25, involve a total expenditure of over \$14,000,000. During the week contracts were awarded for work of all kinds to cost approximately \$4,412,254, while new projects announced for which plans have been completed or are now in course of preparation by engineers and architects involve a total investment of \$9,719,044.

Road work, paving and bridge construction holds first place in the week's total, considering the amount of money involved, contracts being awarded for work of this character estimated to cost \$1,967,133, while announcements were made concerning new projects to cost \$2,943,344. Within the next few weeks contracts will be awarded for school buildings costing \$1,726,000, and for new church buildings to cost \$1,737,000. This new work will continue over a period of many months, and will start before the completion of a big building program of similar structures that is now nearing fulfillment. Throughout the South scores of church and school buildings are being erected, the contracts having been awarded many months ago, some more than a year ago, and the completion delayed because of materials shortage and labor conditions. Now that there has been a marked improvement, these buildings are being completed as speedily as possible and work being started on others.

Apartment-houses and hotels figured prominently in the total of contracts awarded these new projects that will shortly be underway, involving the expenditure of \$730,500, while contracts for dwellings to cost \$364,700 were also awarded. Miscellaneous enterprises for which contracts were awarded will cost about \$480,818, and those to be awarded will cost \$1,107,000.

The individual announcements for the week were more prominent because of the diversified character and large number rather than big amounts of money involved for separate projects. The largest individual amount was for increased telephone facilities at Miami, Fla., to be undertaken over a period of several months at a cost of about \$900,000, and the contracts were awarded for road work and paving in El Paso, Tex., which when completed will cost in the neighborhood of \$475,000.

Following are detailed figures on contracts awarded during the past week and those to be awarded later:

CONTRACTS TO BE AWARDED.

Dwellings—	Bank and Office Buildings—	
Oklahoma City, Okla....	\$7,000	Maryville, Tenn..... \$100,000
Webster Groves, Mo....	6,000	Little Rock, Ark..... 10,000
Asheville, N. C.....	6,500	
Oklahoma City, Okla....	10,000	\$110,000
Oklahoma City, Okla....	5,000	
Fort Worth, Texas....	6,500	Opelika, Okla..... \$40,000
Fort Worth, Texas....	9,750	Live Oak, Fla..... 50,000
Fort Worth, Texas....	7,250	St. Petersburg, Fla..... 50,000
Washington, D. C....	7,000	Bolivar, Mo..... 40,000
Washington, D. C....	10,000	Dallas, Texas..... 600,000
Tampa, Fla.....	12,500	Farmham, Va..... 20,000
Tampa, Fla.....	20,000	Martinsville, Va..... 40,000
Oklahoma City, Okla....	35,000	Norfolk, Va..... 35,000
Oklahoma City, Okla....	21,000	Petersburg, Va..... 40,000
Oklahoma City, Okla....	7,000	Portsmouth, Va..... 30,000
Greenville, S. C.....	7,000	Huntington, W. Va..... 80,000
Sutton, W. Va.....	10,000	Oak Cliff Sta., Dallas, Texas..... 100,000
Huntington, W. Va.....	25,000	Lexington, Ky..... 40,000
Birmingham, Ala. (8)....	50,000	Chesben, Okla..... 30,000
Birmingham, Ala. (50)....	75,000	Memphis, Tenn..... 80,000
Hope, Ark.....	10,000	Portsmouth, Va..... 25,000
Anderson, S. C.....	6,000	Wilmington, N. C..... 25,000
Tulsa, Okla.....	25,000	Huntington, W. Va..... 75,000
Dallas, Texas.....	11,000	Walnut Ridge, Miss..... 30,000
Dallas, Texas.....	20,000	Miami, Okla..... 42,000
San Antonio, Texas....	14,000	Portsmouth, Va..... 20,000
	\$443,500	

Apartment-houses and Hotels—	School Buildings—	
Atlanta, Ga.....	\$75,000	Glen Jeen, W. Va..... 250,000
Oklahoma City, Okla....	15,000	Wetzel, W. Va..... 125,000
Oklahoma City, Okla....	12,000	Hawesville, Ky..... 12,000
Hot Springs, Va.....	35,000	Green Ridge, Mo..... 40,000
Houston, Texas.....	40,000	Trappe, Md..... 35,000
Houston, Texas.....	10,000	Hattiesburg, Miss..... 169,000
	\$187,000	Hattiesburg, Miss..... 75,000
		Hamilton, Mo..... 70,000

Annona, Texas.....	35,000	Westplains, Mo..... 8,600
Gulfport, Miss.....	40,000	Florence, Ala..... 175,000
Weaverville, N. C.....	40,000	Huntsville, Mo..... 500,000
Muskogee, Okla.....	20,000	Westplains, Mo..... 181,000
Witt, Va.....	30,000	
Statesboro, Ga.....	75,000	
Huntington, W. Va. (2)	425,000	
Leesville, S. C.....	50,000	
Electra, S. C.....	125,000	
Kenova, W. Va.....	110,000	

		City and County Building Projects—
	\$1,726,000	Charlotte, N. C..... \$30,000
		Cherokee, Okla..... 125,000
		Bolton, Miss..... 300,000
		Glenville, W. Va..... 13,000

Stores Buildings—		
Fort Thomas, Ky.....	\$18,000	
Norfolk, Va.....	8,000	
Macon, Ga.....	20,000	
Baltimore, Md.....	17,500	
Whitesburg, Ky.....	15,000	
San Antonio, Texas.....	55,000	
Huntington, W. Va.....	50,000	

		Sewers and Drainage Projects—
	\$183,500	St. Louis, Mo..... \$85,700

		Miscellaneous Enterprises—
	\$183,500	Miami, Fla., telephone improvements..... \$900,000
		Cordell, Ga., water mains..... 10,000
		Smithfield, Va., warehouse..... 100,000
		Covington, Ky..... 50,000
		Knoxville, Tenn., bleachers..... 12,000
		Memphis, Tenn., garage..... 30,000
		El Paso, Tex., nurses home..... 130,000
		Dallas, Tex., nurses home..... 30,000
		Parkersburg, W. Va., ice plant..... 30,000
		Huntsville, Ala., lumber plant..... 25,000
		Huntington, W. Va., peanut plant..... 15,000
		Sherman, Tex., ice cream plant..... 50,000
		Kinston, N. C., greenhouses..... 100,000
		Charlotte, N. C., greenhouses..... 100,000
		Winston-Salem, N. C., paper mill..... 75,000
		Taylor, Tex., bottling plant..... 10,000
		Baltimore, Md., garage..... 15,000
		St. Louis, Mo., theater..... 25,000
		Hattiesburg, Miss., pickle plant..... 50,000
		Bastrop, La., ice plant..... 25,000
		N. Orleans, La., stadium..... 50,000
		Bryan, Tex., warehouse..... 25,000
		Houston, Tex., warehouse..... 1,107,000

Roads, Paving and Bridges

Groesbeck, Texas.....	\$59,940	
Hondo, Texas.....	200,000	
Paris, Texas.....	42,804	
Rockdale, Texas.....	48,000	
Coleman, Texas.....	50,000	
Danielle, Va.....	300,000	
Covington, La.....	250,000	
Miami, Fla.....	15,000	
Bronson, Fla.....	80,000	
Gadsden, Ala.....	100,000	
Birmingham, Ala.....	160,000	
Pontotoc, Miss.....	225,000	
Springfield, Mo.....	47,000	
Hickory, N. C.....	150,000	
Oklmulgee, Okla.....	250,000	
Weeeka, Okla.....	51,000	
Houston, Texas.....	50,000	

CONTRACTS AWARDED.

Dwellings—

Baltimore, Md. (42)....	\$200,000	School Buildings—
Baltimore, Md. (3)....	10,000	Washington, D. C..... \$40,000
Baltimore, Md. (1)....	8,000	Pendleton, W. Va..... 25,000
Baltimore, Md. (4)....	12,000	Warren, Ark..... 15,000
Wheeling, W. Va.....	20,000	Lake City, Fla..... 58,000
New Orleans, La.....	18,000	Memphis, Tenn..... 65,000
Winston-Salem, N. C.....	9,000	
Winston-Salem, N. C.....	7,200	
Greenville, S. C.....	12,000	
Winchester, Ky.....	10,000	
Springfield, Mo.....	25,000	
Portsmouth, Va.....	6,000	
Brunswick, Md.....	6,000	
Easley, S. C.....	12,000	
Dallas, Texas.....	8,500	

		\$203,000
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Store Buildings—

Houston, Tex., paving.....	\$16,500	Association and Fraternal—
Norfolk, Va.....	10,000	Little Rock, Ark., remodeling lodge.....
Gardon, Ark., hotel.....	16,000	Chattanooga, Tenn..... \$15,000
Baltimore, Md.....	175,000	Little Rock, Ark..... 15,000
Birmingham, Ala.....	20,000	
Tampa, Fla.....	22,000	
Hot Springs, Va.....	90,000	
Mobile, Ala.....	190,000	
Atlanta, Ga.....	60,000	

		\$130,000
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Apartment-houses and Hotels—

Houston, Tex., paving.....	\$16,500	Roads, Paving and Bridges—
Norfolk, Va.....	10,000	Washington, N. C., paving..... \$421,176
Gardon, Ark., hotel.....	16,000	Cameron, Texas, roads..... 68,670
Baltimore, Md.....	175,000	El Paso, Tex., paving..... 479,245
Birmingham, Ala.....	20,000	Martinsburg, W. Va., 12,000 feet of sewers..... 37,635
Tampa, Fla.....	22,000	Lanes, S. C., bridge..... 140,500
Hot Springs, Va.....	90,000	Kansas City, Mo., paving..... 99,925
Mobile, Ala.....	190,000	Walters, Okla..... 30,000
Atlanta, Ga.....	60,000	Hertford, N. C., roads..... 300,000

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Banks and Office Buildings—

Gassaway, W. Va.....	\$20,000	Church Buildings—
Baltimore, Md.....	35,000	Baltimore, Md..... \$30,000
Portsmouth, Va.....	35,000	Ponca City, Okla..... 30,000
Dumasens, Md.....	6,800	Selma, Ala..... 30,000
		Charlotte, N. C..... 10,000
		Anniston, Ala..... 11,000

		\$71,800
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Church Buildings—

Baltimore, Md.....	\$30,000	
Ponca City, Okla.....	30,000	
Franklin, Texas, roads.....	35,000	
Orangeburg, S. C., bridge.....	14,985	
Ardmore, Okla., bridge.....	340,000	

		\$1,967,136
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City and County Building Projects—			
Owensboro, Ky., stable.....	\$8,500		
Muskogee, Okla., grand-stand	20,750		
	\$29,250		
Sewers, Drainage and Water-works—			
Cleveland, Miss.....	367,000		
Fort Worth, Texas, storm sewers.....	38,350		
Tigerville, S. C., water-works and sewer plant.....	43,000		
Union, S. C., water-works	85,700		
	\$234,050		
Miscellaneous Enterprises—			
Washington, D. C., theater	10,000		
Charleston, W. Va., 3-story warehouse.....			
	\$10,000		

SUMMARY FOR THE WEEK.

	Contracts to be awarded.	Contracts awarded.
Dwellings	443,500	\$364,700
Apartment-houses and hotels.....	187,000	730,500
Bank and office buildings.....	110,000	71,800
Church buildings.....	1,295,000	171,000
School buildings.....	1,726,000	303,000
Store buildings.....	183,500	130,000
Fraternal	728,000	33,000
Roads, paving and bridges.....	2,913,344	1,967,135
City and county projects.....	468,000	29,250
Sewers, drainage and water-works	85,700	234,050
Miscellaneous enterprises.....	1,107,000	480,818
Total	\$9,719,044	\$4,412,254

Fifty-two Southern Cities Show a Total of Nearly \$13,000,000 for January in Building Permits—Definite Efforts Made to Relieve Housing Shortage.

Building permits issued in 52 Southern cities during January involve the expenditure of approximately \$12,806,222 for construction work of all kinds. The reports are distinctly encouraging as regards the amount of money involved and the great variety of projects. During the first week of January there was a great rush for building permits in a number of cities; then these requests began to settle down and come in steadily and in greater volume. There are indications that building operations generally during this year will continue to increase steadily as the year progresses, and will probably not reach the highest level until late in the year. Construction is being resumed on many projects held in abeyance previously for one reason or another, and likewise work that has been progressing slowly is being speeded up.

There is a general feeling that the prices of most building materials are sufficiently low to warrant resumption of building on a big scale; in fact, prices of lumber have already been increased in a number of instances over their recent low levels. Labor conditions and wage problems are being adjusted so that construction can go rapidly forward on a more satisfactory basis.

Construction of dwellings, apartment-houses and hotels figures more prominently than for many months in building permits issued, showing that definite steps toward meeting the housing shortage are under way. While many individuals are erecting houses, there are also in various cities scores of houses being built by large firms and corporations for sale purposes. Similarly, many office buildings, churches, banks and schools are included in the first month's new-building projects.

The record of building permits is as follows:

Forty-two building permits, involving the expenditure of \$62,810, were issued in Asheville, N. C., according to R. L. Fitzpatrick, commissioner of public safety.

According to W. J. May, chief of the fire department of Columbia, S. C., permits were issued during January for new construction work to cost \$71,050. This included a memorial home costing \$28,000, nine two-story frame dwellings costing \$25,000, a dwelling costing \$7600 and five one-story frame dwellings costing \$7000.

Charleston (S. C.) reports having issued 29 permits during January for new construction and repairs costing \$46,925. This included two new brick and 10 frame dwellings, and six repairs to brick structures and 13 to frame dwellings.

J. H. Shores, building inspector of Spartanburg, S. C., reports having issued 25 permits during January for new construction of all kinds estimated to cost \$34,550, which included 15 permits for buildings, small dwellings and garages to cost \$31,125, and 10 permits for garages costing \$3425.

Sixty permits were issued in Knoxville, Tenn., during the month of January for construction work, involving the expenditure of \$61,706. New structures included 13 frame dwellings, two frame stores and four brick stores costing \$24,350. Repair work included four permits for brick structures and 37 for frame, amounting to a total expenditure of \$16,356.

A total of 106 permits was issued during the month of January in Louisville, Ky., involving a total expenditure of approximately \$611,500. This total included seven frame dwellings costing \$28,000, 46 brick and frame additions costing \$31,390 and three factory buildings costing \$530,000, in addition to many miscellaneous items.

During January 25 permits were issued in Covington, Ky., for work involving an outlay estimated at \$21,300, including 12 frame dwellings to cost \$16,900, and nine frame dwelling repairs to cost \$2790.

John R. Eason, inspector of buildings at Savannah, Ga., reports having issued during January 41 permits for work representing a total expenditure of \$62,070.

In Huntington, W. Va., 69 building permits were issued during January for work involving an outlay of about \$128,230, according to W. B. Smith, building inspector.

Columbus, (Ga.) building permits during last month involved investments approximating \$86,100, which included an apartment house to cost \$25,000, three dwellings costing \$3600 and store improvements costing \$7500.

C. W. Hayward, secretary of the Board of Trade, Meridian, Miss., reports that during January 7 permits were issued for new buildings to cost \$16,000 and four for repairs and alterations costing \$450, which represented a decided gain over the figures for the same month last year.

Thirty-five permits for new buildings and repairs to cost approximately \$26,665 were issued during January in Springfield, Mo., new buildings costing \$22,130.

In Dallas, Tex., 275 permits were issued for construction work of all kinds during January to cost \$589,808. This included new residences and apartment-houses costing \$289,300, a \$30,000 church building, 26 business houses costing \$71,028, and 117 repairs costing \$126,980.

Building permits issued in New Orleans, La., during January represented expenditures totaling \$243,361 and numbered 119. This included 41 dwellings costing \$86,175, an automobile salesroom costing \$25,000 and 29 repairs and alterations amounting to \$95,500.

The building record of Atlanta, Ga., for the month of January shows that 189 permits were issued for construction of all kinds costing \$586,909. Five brick business houses, estimated to cost \$22,500, were the major items. In addition there were 42 frame dwellings costing \$137,450 and 102 repairs and alterations costing \$146,665.

During January 150 permits were issued in Little Rock, Ark., for work of all kinds to cost \$176,170. New construction amounted to \$99,650, repairs to residences \$18,628 and repairs to business houses \$57,512.

The cost of construction work of all kinds in Rock Hill, S. C., during January amounted to a total investment of \$61,200, including a brick school to cost \$5,000 and four frame dwellings costing \$500.

Permits to the value of \$316,760 were issued in Fort Worth, Tex., during January, and numbered 132.

Building permits issued during the first month of the new year in St. Petersburg, Fla., represented a total expenditure estimated at \$349,550.

New construction for which 95 permits were issued in Tulsa, Okla., during January represented an expenditure of \$605,800. The total value of permits issued amounted to \$736,400 for 127 permits. Twenty permits were issued for garages and repairs costing \$49,100, while permits for additions numbered 42 for work costing \$1,500.

Thirty-nine permits were issued in Roanoke, Va., during January for work costing approximately \$45,570.

Amarillo, Tex., permits issued in January amounted to 20 for construction work costing \$27,700.

Exclusive of Federal Government building activities in the District of Columbia, 233 permits were issued during the first month of the year for construction work of all kinds estimated to cost \$974,955, compared with 299 permits for work to cost \$1,082,280 during January, 1920. Permits for brick dwellings numbered 48 for work to cost \$435,000, which exceeded all other kinds of construction, and school building permits involved \$225,000, while repairs to brick dwellings amounted to \$142,856. Only four permits were issued for frame dwellings to cost but \$14,500. During the month 66 brick buildings were erected, one of tile and four each of concrete and frame construction. The total value represented by new buildings was \$754,775, and of repairs, \$219,310, according to the report of John P. Healy, building inspector.

During January, 1921, permits were issued in Lynchburg, Va., for business houses to cost \$221,000 and for residences to cost \$665, according to J. Graham Nowlin, secretary of the Chamber of Commerce. During the whole of 1920 the permits issued represented expenditures amounting to \$952,660.

Richmond, Va., issued 92 building permits for construction to cost \$22,495 during January, according to John E. Butler, inspector of buildings. This included new work costing \$289,368 and repair work amounting to \$33,127. Permits for two apartment-houses costing \$160,000 were the feature of the month's activities, and other buildings included a railroad station to cost \$75,000, and alterations and repairs to brick stores costing \$17,390. The erection and repair of residences involved about \$39,000.

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During January a total of 43 building permits was issued in Winston-Salem, N. C., for construction work to cost \$27,225, including 16 permits for improvements and repairs costing \$19,425 and three for new buildings costing \$7800.

During January a total of 33 building permits was issued for construction work to cost approximately \$127,825 in Charlotte, N. C., according to R. G. Connelly, inspector of buildings. This included 10 residences to cost \$47,750, 14 tenant-houses to cost \$20,000, two frame stores \$6000 and garages, etc., \$40,000.

A total of 38 permits was issued in Wheeling, W. Va., during last month for construction work to cost \$19,740, including new work estimated to cost \$3275 and repairs and alterations costing \$10,365. Last year during the same month 12 permits were issued for work to cost \$13,725.

Reports of building operations in Norfolk, Va., during the month of January shows that 54 permits were issued for projects entailing expenditures amounting to \$119,720. This included 14 dwellings costing \$71,500 and additions and repairs costing \$34,850.

BUILDING PERMITS ISSUED DURING JANUARY, 1921.

	No. of permits.	Estimated cost.
Richmond, Va.	93	\$322,495
Lynchburg, Va.	25	27,650
Washington, D. C.	333	974,085
Charlotte, N. C.	33	127,825
Norfolk, Va.	54	119,270
Wheeling, W. Va.	38	19,740
Winston-Salem, N. C.	43	27,225
Asheville, N. C.	42	63,810
Columbia, S. C.	20	71,050
Charleston, S. C.	29	46,925
Spartanburg, S. C.	25	34,550
Knoxville, Tenn.	60	59,705
Louisville, Ky.	25	21,300
Covington, Ky.	44	62,070
Huntington, W. Va.	69	128,230
Columbus, Ga.	4	86,100
Meridian, Miss.	11	30,150
Galveston, Tex.	370	62,826
Miami, Fla.	221	229,700
St. Petersburg, Fla.	...	349,550
Fort Worth, Tex.	132	316,760
Rock Hill, S. C.	10	61,700
Little Rock, Ark.	150	176,170
Atlanta, Ga.	189	586,909
New Orleans, La.	19	243,361
Dallas, Tex.	275	589,808
Springfield, Mo.	35	26,665
Amarillo, Tex.	20	27,700
Tulsa, Okla.	127	736,400
Roanoke, Va.	29	45,570
Charleston, W. Va.	29	46,965
Oklahoma City, Okla.	128	411,700
Muskogee, Okla.	11	19,500
Wilmington, N. C.	14	15,500
St. Louis, Mo.	444	333,025
Kansas City, Mo.	166	1,672,200
St. Joseph, Mo.	31	29,255
Baltimore, Md.	214	1,737,240
Shreveport, La.	211	249,400
Lexington, Ky.	18	59,595
Jacksonville, Fla.	27	481,202
Pensacola, Fla.	95	58,600
Houston, Tex.	409	393,364
El Paso, Tex.	96	114,962
Austin, Tex.	28	15,840
Augusta, Ga.	114	46,540
Macon, Ga.	50	84,610
Tampa, Fla.	96	97,975
Birmingham, Ala.	318	280,533

Southern Industrial Activities Show Good Increase.

Indicative of the forward movement in construction work of all kinds in the Southern States is the following summary prepared from information of activities published in the construction columns of the MANUFACTURERS RECORD for February. This shows in practically all lines an increase over the number of similar items published during the first month of the year.

During January 1585 industrial items were published, compared with 1750 published during February. Items regarding buildings of various kinds amounted to 840 during the first month of the year, while in February this classification totaled 1144. Similarly, financial items numbered 359 and 421 for January and February, respectively.

The number of items concerning road and street construction increased from 312 in January to 340 in February, and, judging from present indications, this classification will continue to grow as plans have been announced for much new road work in various sections of the South. The aim is to get the work well under way before other construction starts elsewhere, and thereby insure early completion of road contracts with a minimum of delay due to shortage of materials and labor. Similarly, construction of dwellings is on the increase, 295 items being reported in February, compared with 242 during the preceding month. School buildings

reported during January amounted to 118, against 202 for the month just past. Likewise, construction of church buildings is going rapidly forward, the past month's totals showing 117 items, while in January church building items numbered 88. Miscellaneous factories and enterprises increased from 298 in January to 321 during the month just closed.

	Total for February.	Total for January and February.
<i>Industrial Developments</i>		
Airplane Plants, Stations, etc.	3	7
Bridges, Culverts, Viaducts.	82	158
Canning and Packing Plants.	10	22
Clayworking Plants.	4	12
Coal Mines and Coke Ovens.	79	171
Concrete and Cement Plants.	3	11
Cotton Compresses and Gins.	22	37
Cottonseed Oil Mills.	5	8
Drainage Systems.	24	34
Electric Plants.	70	122
Fertilizer Factories.	10	16
Flour, Feed and Meal Mills.	32	48
Foundry and Machine Plants.	51	106
Gas and Oil Enterprises.	80	171
Hydro-electric Plants.	15	22
Ice and Cold-storage Plants.	35	54
Iron and Steel Plants.	...	2
Irrigation Systems.	...	40
Land Developments.	40	80
Lumber Manufacturing.	34	87
Metal-working Plants.	23	33
Mining.	38	49
Miscellaneous Construction.	27	63
Miscellaneous Enterprises.	156	283
Miscellaneous Factories.	165	336
Motor Cars, Garages, Tires, etc.	155	258
Railway Shops, Terminals, Roundhouses, etc.	5	17
Road and Street Construction.	340	652
Sewer Construction.	76	138
Shipbuilding Plants.	1	2
Telephone Systems.	16	55
Textile Mills.	20	39
Water-works.	80	142
Woodworking Plants.	46	85
	1,750	3,335
<i>Buildings</i>		
Apartment-houses.	54	89
Association and Fraternal.	38	44
Bank and Office.	53	93
Churches.	117	205
City and County.	40	61
Courthouses.	9	20
Dwellings.	295	537
Government and State.	14	25
Hospitals, Sanatoriums, etc.	26	47
Hotels.	46	67
Miscellaneous.	48	88
Railway Stations, Sheds, etc.	16	32
Schools.	202	320
Stores.	113	201
Theaters.	43	66
Warehouses.	27	56
	1,144	1,984
<i>Railroad Construction</i>		
Railways.	10	29
Street Railways.	1	6
	11	35
<i>Financial</i>		
Corporations.	101	204
New Securities.	320	573
	421	780
<i>Machinery Wanted</i>		
Machinery, Proposals and Supplies Wanted.	589	1,036
<i>Fire Damage</i>		
Fire Damage, etc.	298	549
Totals.	4,143	7,719
Foreign.	10	16

Important Good Roads Meeting at Greensboro.

The United States Good Roads Association, the United States Good Roads Show, the Bankhead National Highway Association, a conference of engineers and commissioners from 10 States, and a conference of automobile dealers will be held in Greensboro, N. C., from April 18 to April 23.

Following are some of the exhibitors who will have displays at the meeting:

J. D. Adams & Co., Indianapolis, Ind.; Northwest Engineering Co., Chicago, Ill.; the Heil Company, Milwaukee, Wis.; the Burch Plow Co., Crestline, O.; the Fate-Root Heat Co., Plymouth, O.; W. W. Boxley, Roanoke, Va.; Jennings' Dumpbody Co., Roanoke, Va.; Birmingham Slag Co., Birmingham, Ala.; E. F. Craven, Greensboro, N. C., representing five different machinery firms in that number of booths; Sydney Wheel Scraper, Sydney, O.; the Lee Planer Co., Chicago, Ill.; White Truck Co., Armleder Truck Co., Oakland Passenger Car Co., Essex Passenger Car Co., United States Good Roads Bulletin.

Serious Problem Presented by Housing Shortage

COUNTRY GRADUALLY AWAKENING TO NECESSITY OF PROVIDING MORE AND BETTER LIVING ACCOMMODATIONS—IMMENSE SUMS REQUIRED EVEN TO CARE FOR IMMEDIATE NEEDS—VAST QUANTITIES OF BUILDING MATERIALS DEMANDED.

By CARROLL E. WILLIAMS.

All students of the housing situation in this country place the shortage of houses at from 1,000,000 to 3,500,000. This does not mean that this number of families is not housed, but that the housing facilities are that number short of being sufficient to care for these families in comfortable, livable quarters. It means that millions of people are crowded into close quarters, injurious to morality and health, and provocative of bolshevism and hatred of all who are better housed. The seriousness of the situation is scarcely grasped by those who have read time and again that there exists a shortage of 1,000,000 to 1,250,000 or even 3,500,000 houses, according to the various statements of different authorities. Unless the housing shortage be expressed in terms of money, the pleas for action in the matter will continue to fall to a large extent upon deaf ears. Hence, if we are to emphasize the necessity for a careful and immediate consideration of this subject, of such vital importance to the stability of American morality, prosperity and progress, it appears that the cash expenditures involved in the fulfillment of the housing program must be given foremost consideration.

Assuming that the shortage is 1,000,000 houses, which is an extremely conservative estimate, the cost of erecting these houses at \$5000 each will reach the enormous total of \$5,000,000,000—five thousand million dollars. At first thought \$5000 may appear a high average figure for the houses needed, but it is not. If anything, it is too low. The houses erected will not be sold for cash. They will be built largely on borrowed money and bought principally with borrowed money. In many cases both the purchaser and builder will pay the legal rate of interest for their loan, in addition to bonuses to banks, trust companies or building associations, besides fees to lawyers. All this, coupled with the cost of construction, price of land, incidental expenses and allowance for a fair profit, apparently establish the conservative character of such an estimate.

Previous to 1914 the modern, daylight, all-convenienced dwelling was erected almost exclusively for a class of clients in the suburbs of the big cities away from the rows of narrow, badly lighted and poorly ventilated homes. These old-style houses were intended for those who could not afford anything better and the suburban houses for the prosperous business man.

Today, we find that an almost startling change has taken place. The rows of narrow attached dwellings, with unlighted inner rooms and without the many conveniences which are now considered essential in house construction, are no longer in demand, and hence that type of structure is not now being erected as formerly. Instead, semi-detached or wide-attached porch-front houses provide a home with all modern conveniences, including adequate equipment, sanitary bathrooms, fireplace, modernized kitchen facilities, well lighted and ventilated communicating rooms.

The individual cottages of 1914 are being extensively replaced by more attractive, more carefully planned houses, erected from designs made by trained architects. Hence these new cottages have an inviting and artistic appearance, with a corresponding happy effect upon the mind of the owner. They are equipped with built-in features, such as kitchen cabinets, bookcases, china closets, window seats, fireplaces and whatever the modern housewife may desire, in addition to all modern conveniences, as bath, electric lighting, hot water or steam heat, provision for electric stove and vacuum cleaners, and a basement under the entire house fitted up for laundry and other purposes.

This spirit of modernity and of up-to-dateness has not been confined to cities and suburbs; it has spread to the town and country districts and has been adopted extensively.

One result of this almost complete transition to modernization in the style of houses is to help drive the cost of construction to high levels. It is certain, however, in any consideration of a solution of present-day housing problems that the modern, all-convenienced home is here to stay, and designs are to be further improved. Therefore we may safely conclude that the new price level for

houses will never reach pre-war levels. The standards of price and construction have both been raised, and raised permanently. Instead of adopting a course of going back to normal, as so many people are unwisely clamoring for, we must, if we are to successfully solve this question, go forward to normal.

Naturally, whatever reduction is brought about in labor costs will reduce the cost of the product of labor. We cannot expect and should not desire pre-war prices on what we consume, nor on the houses we live in. With the erection of these new-type houses there has come a proportionate increase in the amount of labor expended, notably in the installation of plumbing and heating equipment, electric light and power facilities, hardwood and tile floors, slate and composition near-fireproof roofs, concrete and tile basements, most of which require the services of skilled and semi-skilled laborers at a comparatively high figure when considered even on a basis of pre-war scales. The future course of building material prices is purely problematical, and will be governed largely by supply and demand. A resumption of building on a large scale may raise the cost of material because the stocks now on hand are low, as the result of decreased production during the period of readjustment. An immediate resumption of building activities on a conservative scale will do much to relieve the present shortage of houses and help to stabilize wages and prices of material.

House building must be encouraged. If 300,000 houses should be erected annually, which is far above the total erected during the past three years, it is obvious that four years will be required to build a million homes, and the demand for more houses will still be increasing at the normal rate, so that a shortage will probably be continuous for many years. The erection of 300,000 average size houses will require an enormous quantity of materials. If built entirely of frame construction, an average of 25,000 feet of lumber per house would be required, or 7,500,000,000 feet (seven and a half thousand million feet) in a single year. If built of brick, 40,000 will be required for the average house, thus involving the use of 12,000,000,000 bricks.

In addition to brick or lumber, vast quantities of lime, cement, plaster, wallboard, roofing materials, plumbing supplies, heating equipment, electrical appliances, hardware supplies and many miscellaneous materials will be needed, thereby creating a demand in many different channels, and as a result placing scores of plants in operation at capacity and giving employment to thousands in addition to the workmen engaged directly in construction work. Extension of water lines, sewer systems, roadways and other similar municipal facilities will be necessary. Public utility plants will have to be expanded to care for the greatly increased demands. Furniture plants will be operated at capacity. In fact, such activity would be reflected in expansions in practically every line of industrial and commercial endeavor that the country would be likely to prosper as never before, for the expansion would be essential and normal and widespread.

The need for more houses is acute. The large cost necessarily involved in carrying out a housing program designed to meet present and near future needs is now recognized by well-informed authorities, and it is agreed that these expenditures must be made. The widespread benefits and the general revival of business in every line resulting from a building boom undertaken on the proper scale would soon be evident to everyone.

That the country is waking up to the stupendous task that confronts it is indicated by the great amount of study the problem is receiving at the hands of large and progressive industrial concerns interested in the solution of their individual labor and housing problems, and by the publicity given the subject by many commercial and general business interests who are striving for a general resumption of buying and building. Similarly, many civic organizations, chambers of commerce, manufacturers of building materials, producers and distributors of lumber, hardware men and others are directly or indirectly trying to rouse the country to its housing needs.

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Readjustment of Freight Rates Strongly Urged

JOHN A. TOPPING SPEAKS OPTIMISTICALLY OF OUTLOOK UNDER NEW ADMINISTRATION, BUT REGARDS PRESENT FREIGHT RATES AS GREAT HANDICAP TO INCREASED BUSINESS.

By JOHN A. TOPPING, Chairman Republic Iron & Steel Co.

Asked for an opinion as to what are the prospects for iron and steel, and as to whether present adjustments have gone far enough to establish a stable basis for values, or, if not, what other adjustments are needed to bring about trade recovery, I may state that slow recovery for iron and steel is under way, stocks are being reduced and demand is accumulating, because buying is at a standstill in both domestic and foreign markets; but this big country cannot long maintain itself with purchases of iron and steel on their present restricted basis. Steel prices today are on a bargain-counter basis, and I believe demand will be greatly stimulated when all obstacles to reconstruction are removed, the most important being, from a world-trade standpoint, the settlement of the German war indemnity. The other, from a domestic trade standpoint, is of equal importance, viz., readjusting transportation from war to peace basis.

As to the war indemnity problem, the coming conference of the Powers promises something definite, and let us hope that some practical and mutually satisfactory basis will soon be established which will enable the world to get back to work.

The railway problem is a practical one of reducing the cost of conducting transportation to more nearly the pre-war level, and to accomplish this the railways must have not only the co-operation of labor, but of all other interests. The general liquidation which has taken place in commodity values has been a substantial help in reducing costs of conducting transportation, this being notably true of coal, iron and steel supplies. Labor, however, the largest single item, has not responded, but should do so in its own interest, otherwise traffic will continue to shrink in volume and unemployment will be emphasized. Aside from reasons of employment, labor should make its contribution to cheaper cost of transportation, because labor rates during the war advanced out of proportion to the increased cost of living.

Labor reductions, I think, have been fair and also justified by changes in living costs. Remember that labor rates since 1914 were advanced 165 per cent, whereas the Industrial Conference Board reports, for the same period, cost of living advanced 104.5 per cent. On the other hand, the United States Bureau of Labor shows that January, 1921, living costs, measured by wholesale prices, are down 35 per cent, and by the retail standards 14 per cent, but with retail prices rapidly shrinking.

Another comparison is equally convincing when January, 1921, labor rates now in effect at most steel works of this country are considered; that is to say, the adjusted labor scale of February, 1921, is about 90 per cent above 1914 rates, whereas living costs since 1914 have increased 77 per cent.

Reductions in freight rates will help business by stimulating business confidence, because present rates are **war rates**, and everyone knows they cannot be maintained, and buyers are withholding purchases in anticipation of readjustments, which railroad executives have publicly admitted reductions **must be made to stimulate traffic**. The importance of iron and steel to railway traffic is not fully appreciated by the public, but its importance is suggested when it is considered that it requires six tons of raw material movement inbound to produce one ton of outbound finished product, and therefore the present war schedule of freight rates, with advances on the different iron and steel commodities, which range from 90 per cent on long hauls to 300 per cent on some short hauls, is not only restricting traffic, but **adversely affecting railway revenues** and working a great injury to the great army of workers in the independent steel trades. Furthermore, anything that will help railway revenues will stimulate steel demand.

While war freight rates have not so far adversely affected our export trade, for reasons generally understood, yet freight rates below domestic rates will be necessary **when European produc-**

tion begins in earnest, as we will not only have to compete with cheaper labor, but a depreciated mark, franc or shilling, and these disadvantages will weigh heavily against us without railway freight co-operation.

As to the political situation, the result of a change in Administration, there can be no question about the business public's confidence in President-elect Harding, and while the problems confronting the new Administration are big ones, the ability within the party is big enough for their solution. Business at least feels that it is in the hands of its friends, and instead of having governmental opposition will have hereafter governmental co-operation.

I therefore feel confident, as previously stated, that while we are not "out of the woods," yet we can see daylight, and are making progress toward improvement, and with normal crops in prospect this improvement should be accelerated later on.

Railway Officials' Salaries and the Question of Employees' Salaries and Cost of Transportation.

Editor Manufacturers Record:

Dallas, Tex., February 16.

With familiarity with the leading magazines and papers and the MANUFACTURERS RECORD, with no spirit of flattery, I do not hesitate to say that as to fairness to all sides of great questions and persons, in comparison with any of them it stands in the very front, nor in ability and a rich treasure of information in the comparison can it suffer. But the very greatness of its editor is the assurance that he will welcome criticism—that "Homer sometimes nods."

Too much commendation cannot be given to the first half of the editorial on page 75 of the issue of the MANUFACTURERS RECORD of February 10. In what it says of the hold-up of the railroads by employees and that infamous Adamson bill it displays a moral courage that, in the interests of our country, is sorely needed. But its characterizing largeness of salaries of railroad officials as "graft," etc., by furnishing "labor" leaders the "straw" for drowning men to grasp and foster their anarchistic agitations, measurably neutralizes the otherwise great salutary force of the excellent editorial, for nothing is more certain than that those leaders gladly seize on and pervert such statements to create, for their anarchistic agitation, helpful prejudice.

As to the question of whether railroad officials' salaries are too great, there may be room for reasonable differences of opinion. But I suggest for consideration (1) that comparatively few railroad officials "get from \$50,000 to \$100,000 a year" as salaries. From a recent long list, carefully made, of salaries of railway officials this statement is made. (2) The number of railroad officials receiving the largest salaries is too few to affect the expense of railroads, as a whole, at least to any material or practical extent. (3) In comparison with salaries of many great life insurance officials and the salaries of many other great business managers, railroad officials' salaries are far from being relatively too great. (4) Railroad officials' salaries, even the largest of them, are not greater, yea, not so great as many great business managers are making from their own private business. The ability displayed by great railroad managers in railroad management demonstrates that, were they managing for themselves their own business, they could make far more than \$100,000 or \$150,000 a year." The writer has in mind several railroad officials whom he knows to have made more by their private business than by their railroad management. (5) That railroad directors, just as in case of insurance companies and other businesses, did not set railroad officials so high except for the reason that they regarded their services well worth the money paid as their salaries. Rarely does any railroad official control such a majority of shares as to be able to set his own salary. Surely,

the judgment of railroad directors as to the salaried value of railroad officials should be of far greater reliability than that of even the best judges, not familiar with the business, especially than the judgment of anarchistic labor leaders. (6) In private life or private business thousands and thousands of men are making far more than the highest railroad officials are making. While hundreds of men by their private business have become and are becoming millionaires, millionaires made by railroad officials' salaries are as scarce or about as scarce as "hen's teeth." Whoever heard of railway official salary making a Rockefeller or a Carnegie?

W. A. JARREL.

[In part the MANUFACTURERS RECORD agrees with the views stated by Rev. Dr. Jarrel in regard to the value of the services of leading railroad officials. It believes in high salaries and high wages, but when business conditions are such that wages must be cut down, it believes in starting with the officers. This is not a new theory with the editor and officers of this publication. In times past they have practiced in that respect exactly what we are here preaching.

Railroad officials are, as a general proposition, worth all the salary which they are paid. We would not for a moment minimize the importance of their work and the fact that it should be paid for fully and freely for value received in service; but this country is facing the situation that railroad wages must be reduced in order to save the railroads from destruction. We believe that this can be brought about to the advantage of railroad properties and railroad security-holders more readily by voluntary action on the part of railroad officials in taking the lead in salary reduction.

A Mississippi road started with this very proposition; its officers reduced their own salaries voluntarily before they asked their employees to accept lower wages, and our suggestion was based on the views expressed to us by one of the leading railroad presidents of the country.

We are not concerned as to the use by socialists of the editorial of the MANUFACTURERS RECORD on the subject. We are only concerned with stating the truth and leaving the results with Providence. It is quite true that the salaries of officials were not increased at all in proportion to the increase in wages of other employees, nor in proportion to the increase in the cost of living. One might argue on these points all day, but as a simple matter of fact we face the condition that unless officials' salaries are reduced voluntarily, it will be a very difficult proposition to bring about by moral suasion or by legal action the reduction of wages of railroad men, even where \$18 a day is said to have been proudly boasted of by a freight conductor on branch line as his pay. If he and his crew had been honest and made their runs as they should be made, instead of lengthening their time on the road in order to draw more pay, they and the railroads would not now be piling up real hatred on the part of farmers and the public generally in that community. Let the cut start at the top, and then the public will force the railroad employees to accept lower wages.—Editor MANUFACTURERS RECORD.]

BUSINESS IS WHAT YOU MAKE IT.

An Inspiring Story of Creative Salesmanship As Exemplified by a Western Tractor Company Under Adverse Conditions.

Hart-Parr Company.

Charles City, Iowa, February 21.

Editor Manufacturers Record:

We have noticed with much interest that the MANUFACTURERS RECORD is psychologically right in the attitude you are taking in publishing news items showing business success rather than business failures during the recent months of strenuous business conditions. If more magazines and newspapers would take this attitude, then the so-called business depression would rapidly turn to a period of business prosperity. Nothing promotes success like success.

If one manufacturer learns that another manufacturer is succeeding during a period of business depression, it will stimulate him to go out and do likewise. If, on the other hand, a manufacturer hears nothing but business tragedies all about him, he will curtail his efforts and believe that business is not to be gotten. Boiled right down to its last analysis, the best way to get business is to go out and get it.

Early last summer, when the tendency was to curtail business effort, Hart-Parr Company studied the situation carefully, decided to use fighting tactics and increase efficiency. They analyzed their territory as never before; they set to work to educate their distributor and dealer organizations, so that they, in turn, absolutely knew conditions in their territories, and, knowing them, should be able to solve them.

It is hard work to educate the other fellow to our viewpoint. The only way to do it is to go out and demonstrate that you are right. We picked two widely separated territories for our demonstration; one in Colorado, in the dry farming section, where conditions are, if anything, worse than in any other agricultural territory in the United States. The other demonstration was in the corn-belt territory of Eastern Iowa. We called in the distributor from each of these territories, helped him analyze his local conditions, showed him how to solve his problems, gave him a system which, if he worked carefully, would result in sales, and sent him back enthused with the idea that he could get sales regardless of conditions.

The results have more than justified our expectations. Our Colorado distributor, in the gloomy months of November and December, sold a trainload of 100 tractors to dealers and farmers in that dry farming section east of the Rockies. Our distributor in Eastern Iowa, with the same determination, sold a trainload of tractors in January to the corn-belt farmers in that territory; not only direct to his dealers, but the majority of them sold direct into



TRAINLOAD OF 100 TRACTORS EN ROUTE TO FARMERS OF EASTERN IOWA. IN THE CARS AT THE END OF THIS TRAIN ARE 75 FARMERS TO WHOM TRACTORS WERE SOLD AFTER A DEMONSTRATION AT THE FACTORY.

BOOSTER TRAIN LOAD HART-PARR FARM TRACTORS SPEEDING TO CEDAR RAPIDS, IOWA.

FOR EAST IOWA HART-PARR CO.

PHOTO BY C. G. BACHMAN

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the hands of farmer prospects. To our mind, these demonstrations that business is what you make it are the biggest things that have happened to our company in years.

The Hart-Parr Company is in the business of world-wide distribution of tractors, yet in every corner of our territory distributors and dealers are stimulated by the effect of those trainloads of tractors being marked by the distributors in Colorado and East Iowa, and are out fighting tooth and nail for business, and they are getting it. What business needs is more courage and more faith in its own ability. Nineteen hundred and twenty-one is going to be a wonderful year for those manufacturers who have the courage of their convictions to go out and fight for business. The world has not yet come to the point where it can get along without the essentials necessary for its existence. What it asks of us today is to show the ultimate purchaser how he can purchase one of our tractors and through its use solve the problems which are confronting him today. This requires real creative sales effort. The trouble with so many of us today is that we have forgotten the old creative salesmanship. Our job during 1921 is to return to first principles, and in the application of those principles we will find success.

We appreciate the splendid work which you are doing for business as a whole through your magazine.

HART-PARR COMPANY.

South Carolina Industries Prosper in 1920.

By A. B. BRYAN, Clemson College, S. C.

There was a \$50,000,000 increase in the products of South Carolina industries in 1920 over the high-water mark of 1919. The manufactured products of all industries in the State in 1920 was \$405,239,574, as opposed to \$355,181,322 in 1919. In 1908, the first year in which the labor division of the Department of Agriculture kept records, the total product of South Carolina industries was \$108,454,972. The product for 1920 was, therefore, nearly four times as great as that of 1908, showing a remarkable increase in the 12 years in which records have been kept.

The total capital invested in industries was \$95,203,199 in 1908, \$201,237,320 in 1919 and \$223,127,998 in 1920. The number of employees has increased from 70,249 in 1908 to 80,810 in 1920, and the wages of these employees increased from \$20,681,880 in 1908 to \$5,172,374 in 1920, which is an increase of three and one-half times during 12 years, although the number of employees had increased only about 14 per cent. The wage increase of 1920 over 1919 was \$16,653,000, or more than 30 per cent. The greater part of this increase was in the textile industry. Wages in oil mills and fertilizer factories remained practically the same. The average annual wage in 1908 was \$294, or less than a dollar a day. In 1920 the average was \$3.60 per day for each of the 259 working days, the general average of the number of working days per year having been pulled down by ice plants, oil and fertilizer mills and other part-time industries.

There was a falling off during 1920 of \$3,600,000 in the products of fertilizer factories, \$10,000,000 in the value of oil-mill products, \$2,800,000 in the products of foundry and machine shops and \$1,000,000 in flour and grist-mill products. However, the grand total was pulled up by the fact that products of the textile mills increased in value from \$228,912,000 to \$286,158,000, which is an increase of 25 per cent over 1919. Lumber, timber, printing, mineral matter, electricity and other industries also showed marked increase in the value of their products.

Guayule Rubber Industry Reviving in Mexico.

Monterey, Mexico, February 25—[Special.]—Revival of the guayule rubber industry of Northern Mexico on an extensive scale is to take place soon, according to information received here from the Torreon district, where most of the manufacturing plants are situated. The Continental Mexican Rubber Co. is preparing to resume the operation of its \$5,000,000 factory at Torreon, which has been idle for a long period. The guayule rubber factories of the Madero interests are to begin turning out the crude rubber again soon. There are a number of these factories scattered through the States of Coahuila and Zacatecas.

GEORGIA CROP PRODUCTION IN 1920.

Ranks Third Among Southern States in Value of All Crops Last Year—Twelfth in Country.

The farmers of Georgia performed their full duty last year in contributing to the world's supply of food and raiment, according to John S. Dennee, agricultural statistician for the Georgia Co-operating Crop Reporting Service, a combination of the forces of the United States Bureau of Crop Estimates and the statistical division of the Georgia Department of Agriculture. Mr. Dennee furnishes the following figures:

The farm value of Georgia's crops in 1920 is estimated at \$323,290,000 in crop value, ranking twelfth among the 48 States. In the pre-war year, 1913, Georgia's crops were valued at \$279,171,000, and at that time cotton, the major crop, was selling for almost exactly what it is bringing today. Georgia excelled all other Southern States, except Texas and North Carolina, in the value of crops last year. Texas led the country. North Carolina had slightly better than half of Georgia's planted acreage, but included 582,000 acres of tobacco, which yielded the producers \$167 per acre, against Georgia's cotton, which returned an average of only \$20.66 per acre.

In 1920 Georgia produced 76,500,000 bushels of corn; 2,110,000 bushels of wheat; 11,550,000 bushels of oats; 1,628,000 bushels of Irish potatoes; 13,764,000 bushels of sweet potatoes (in this crop holding second place); 290,000 bushels of rye; 16,020,000 pounds of tobacco; 771,000 tons of hay; 7,616,000 bushels of peanuts, nearly a fifth of the country's crop; 990,000 bushels of cowpeas; 9,637,000 gallons of cane syrup, exceeded only by Alabama, and 1,410,000 gallons of sorghum syrup.

In cotton production Georgia ranked third, exceeded only by Texas and South Carolina. The crop last year reached only 1,400,000 bales, with an estimated farm value (lint and seed) of \$127,900,000, say two-fifths of the aggregate value of all crops produced in Georgia that year.

The peach crop had a bad year, but Georgia shipped, notwithstanding nearly 7,000 carloads, over 1,600 of which went to New York. Georgia's peach orchards cover, at a conservative estimate, 140,000 acres, and number over 18,000,000 trees. At a fair valuation these orchards are worth over \$40,000,000. California alone exceeded Georgia in quantity, but not quality, of peaches produced.

Pecan production was short, only 1,993,000 pounds. Apples produced amounted to 1,765,000 bushels; pears, 148,000 bushels.

In watermelon production Georgia led the entire country, with 40,333 acres. Florida, the nearest competitor, had 12,000 acres less.

Georgia's peaches, watermelons and pecans are justly celebrated, and enjoy a great sale in the Northern and Eastern cities.

There are 310,737 farms in Georgia, averaging 93 acres to the farm. Last year, roughly estimated, these farms produced 23,978,628 dozen eggs. Over 2,000,000 people live on farms in Georgia, say 70 per cent of the population. The State has 4,933,000 farm animals, valued at \$141,000,000. Livestock forms an important part of Georgia's wealth. In the production of hogs it holds sixth place in the entire United States. There were 3,102,000 hogs on farms, valued at \$35,673,000, at the close of last year. A comparison of aggregate livestock values places Georgia sixteenth in the whole United States in the value of farm animals.

Lancashire Cotton Trade on Short Time.

Manchester, England, February 4—[Special.]—At the ordinary monthly meeting of the General Committee of the Lancashire Federation of Master Cotton Spinners' Associations held in Manchester today, the state of trade was considered, and it was decided to recommend the members to continue short-time working in the American section to the extent of 50 per cent production for a further period of one month, when the matter will again be dealt with. With regard to the Egyptian section, the curtailment of production to the extent of stopping the mills on Saturdays and Mondays will continue for another fortnight, when the state of trade will again be considered. It may be mentioned that, owing to the severe depression which exists throughout the Lancashire cotton industry, many firms are now restricting output to a larger extent than recommended by the Masters' Federation. Some spinning mills are being forced to stop for a week at a time.

CUBA RETURNING TO NORMAL.

Passing of Moratorium Period Will Greatly Accelerate Betterment in Conditions.

Signs of an immediate return to normal business conditions in Cuba, both in respect to domestic and foreign trade, are everywhere apparent in the Island Republic, according to Allan W. Graves, manager of the Havana line of the Merchants & Miners' Transportation Co., who has just returned to Baltimore from a business trip to Havana.

While Mr. Graves' trip to Cuba was primarily to look into the shipping situation from the viewpoint of American exporters to that country, his investigation of the Cuban sugar industry, commercial conditions, building activities and other branches of trade convinced him that the temporary disruption due to congestion and other unsettled conditions which brought about the moratorium is at end, and that from now on greater quantities of supplies of all kinds will be bought in the American markets. Cuban business men reported that by early summer business there will be upon a more substantial basis than at any time since the outbreak of the European War.

The passage of the Torriente law, providing for the liquidation of all accounts within 135 days from January 27, and supplanting moratorium conditions, will, in the opinion of Mr. Graves, bring about an early payment of money due American manufacturers from Cuban buyers. Furthermore, it will reopen Cuban markets when considered in connection with the establishment of a Sugar Commission. The Sugar Commission, by taking the sugar industry out of the hands of speculators, will establish prices that will yield a profit to the growers and grinders, while tending eventually to lower the price of sugar to consumers.

Mr. Graves laid particular emphasis upon the improvement in shipping conditions in Havana harbor. While he said the Merchants & Miners' Transportation Co. had been notably free from difficulties in unloading cargoes in Havana, overcrowded facilities and customs had made it difficult for many Americans to secure deliveries upon shipments. Mr. Graves said the vessels operated by his company had made a remarkable record in discharging cargoes, the last 12 ships having averaged only eight days awaiting discharging berths.

"Foodstuffs of all kinds, machinery, building material, lumber, cement, structural steel, railroad materials and other supplies will be purchased without further delay by Cuban merchants," said Mr. Graves, "in order to replenish the shortage due to congestion and other causes.

"The recent loan negotiated by the railroads of Havana, amounting to \$15,000,000, to purchase equipment, is the first real evidence of the resumption of trade with the United States. An enormous storage warehouse, which had been started before the suspension of business, will be completed without further delay. The sugar plantations will be in this market for machinery and coal. Merchants will be in the markets for new supplies of goods.

"A new custom-house ruling provides also for the removal of goods from the wharves within five days by the owner or they will be transferred by the authorities and sold at public auction. This will exert a wholesome influence in overcoming congestion. In fact, seized goods are being sold in the stores now under this arrangement."

New Oil Field in Coahuila.

Monclova, Mexico, February 21—[Special.]—In a report on the oil possibilities of the territory around Monclova, which has just been made by W. S. Adkins, professor of geology of the University of Texas, it is stated that the structure is favorable to the existence of oil in paying quantities. Mr. Adkins recently finished a geological survey of the northern part of the State of Coahuila, extending from the Rio Grande to Monclova. The survey was undertaken for the primary purpose of determining whether or not artesian water was to be found, but it had not progressed far when the strong geological indications of oil attracted Mr. Adkins' attention and he conducted the research along that line. As a result of his survey, extensive oil leases have already been acquired in the Monclova region by American interests, and a large wildcat drilling program has been arranged.

Increased Sailings to Southern Ports.

The Merchants & Miners' Transportation Co. of Baltimore is increasing its service to the point where there are now three sailings weekly from Boston to Norfolk.

Herbert Sheridan, traffic manager of the company, in a statement to a representative of the MANUFACTURERS RECORD, says this means that Southern merchants have the benefit of "through rates and through car service from Norfolk to the principal points in the South and West which are operated by the various lines." In addition there are two sailings weekly from Providence to Norfolk. Continuing, Mr. Sheridan said:

"Transportation is receiving increased attention these days, and, fortunately for all concerned, shippers and carriers have greater ease than formerly in understanding the necessities, hardships and ambitions of the other interests. One important factor in transportation fails to receive as much consideration at times as conditions warrant, and this is a reminder for shippers and receivers to foster and support to the proper extent the coastwise steamer service, lest in these days of scant tonnage and acute railroad conditions all the sympathy and most of the tonnage go to the railroads and our coastwise lines be starved. A shining example of regular beneficial service operating all the year on dependable schedules is that of this company, which began operations in 1854. Three sailings weekly are being made between Norfolk and Boston, two between Baltimore and Boston. Two sailings weekly are also made between Providence and Norfolk, and one between Providence and Baltimore.

"There are weekly sailings between Baltimore, Savannah and Jacksonville, and also weekly sailings between Philadelphia, Savannah and Jacksonville. The certainty of arrival of shipments at destination because of freedom from congested points, coupled with attractive rates, ought to qualify this line and others for generous recognition, since it is well known that there has been no profit in operation of coastwise steamer lines for the past two years.

"Any marked decrease in coastwise water service would react most unfavorably on trade and commerce generally, so that out of pure selfishness of necessity the South should regard with pride and relief coastwise steamer lines like the Merchants & Miners', which for many years has coupled Northern and Southern ports with bonds of trade and friendship."

West Virginia Driving Ahead in Mining and Manufacture.

Charleston, W. Va., February 26—[Special.]—Growth and development of manufacturing, mining and timbering industries in West Virginia during January, despite the handicap of commercial depression, was reflected in the large number and the variety of the companies chartered by the State. The aggregate capital of all the companies formed reached a total of \$12,663,500, including 99 resident corporations and 15 nonresident corporations. Coal companies organized had a combined capitalization equal to about one-third of all the companies organized, the aggregate being \$4,362,500. Twenty-six out of 114 companies chartered were coal companies. There were three million-dollar companies launched. One was a coal company, another a real-estate company, and the third, the Wheeling Steel Products Co., through which much of the production of the Wheeling Steel Corporation will be marketed. One \$500,000 banking and trust company was organized during the month. Several companies, in fact, were organized with an authorized capital stock of \$500,000.

Petroleum Specifications Standardization Committee.

Organization of the Interdepartmental Committee on Standardization of Petroleum Specifications, which supersedes the war-time committee on the same subject, was effected at the first meeting of the Committee held at the Bureau of Mines, Washington, D. C., February 19. In addition, the Committee gave its approval to Bulletin 5 of the old committee, thus continuing in force the specifications on gasoline, kerosene, fuel oils, lubricating oils, signal oils, etc., contained in that bulletin.

Good Roads the Assured Prophets of Progress

By ROBERT STUART MACARTHUR.

Good roads are among the best evidences of civilization. Roads are the evangelists of progress; they are the harbingers of true advancement; they are the messengers of education; they are the preachers of the gospel of truth and of love. No roads, no education; no education, no roads. The two things must always go together, whether in Asian, European or American countries. Early in the history of the world this truth was recognized; it is emphasized today in many countries where good roads are virtually unknown.

The earliest roads in history were highways of commerce and war. Occasionally these roads were only footpaths; then they were enlarged so as to accommodate beasts of burden and chariots of war. The Carthaginians were the first conspicuous road-makers. They antedated even the Romans. A very remarkable people were the Carthaginians. Their famous ancient city and State was in Northern Africa, on the Mediterranean Sea. Their chief city, Carthage, was near the site of the modern Tunis. It was said to have been built by Dido about 850 B. C. It certainly was founded by Phoenicians, whose home was on the east shore of the Levant. The Phoenicians were of Semitic stock; they came into history with Sidon as their ruling city about 1500 B. C. They reached their zenith under Tyre, 1200—750 B. C. Ultimately they merged in the Roman Empire. They sailed every sea and planted their colonists all over the Mediterranean, the Aegean and the Euxine seas, and even beyond the Pillars of Hercules, to Africa and to Britain, and to the countries on the Baltic they carried their commerce. But their greatest colony was Carthage. In laying its foundation they sapped the strength of the mother-country. But Phoenicia's greatest gift to civilization was the alphabet, which she developed from Egyptian hieroglyphics; its great merit of simplicity enabled it to supersede, among civilized nations, every other system. They worked mines of different metals in Spain, and went to Britain for tin, which they carried to Tyre and Sidon to be used in manufacturing bronze. But next to their service in the introduction of the alphabet was the benefit which they brought to the race by the creation of good roads. In this respect they antedated the Romans.

But the Romans, who finally conquered the Carthaginians, surpassed them as road-makers. In the construction of the magnificent Appian Way, begun by Appius Claudius, 312 B. C., and finished by Augustus, Rome amazed the world. The Appian Way was an ancient Roman military road which connected Rome with Alba Longa, thence went to Capua, Beneventum and Brundisium. It was called *Regina Viarum*, "The Queen of Roads." It was paved with blocks of hewn stone laid on cement. It is still in a state of excellent preservation. The new Appian Way runs parallel to the Ancient Way. It was made by the direction of Pope Pius VI in 1789. Brundisium is now Brindisi, a seaport town on a bay of the Adriatic Sea. Its harbor finally became blocked up with sand, and the place went to ruin; but since the opening of the Suez Canal, Brindisi has again become important, as it is now on the shortest route to the East. One can now go by rail to Brindisi, and thence by steamer to Alexandria, in Egypt; thus the journey to the East is shortened by several days. Thus the great road of the Romans is justified by the wisest plans of travel in our own days.

There is in England a striking example of the excellence of Roman roads in what is called "Watling Street." This is one of the great highways of Britain. It begins at Dover, passes through Canterbury and Rochester to London; thence it goes to Chester and York. In two branches it passes on to Carlisle and to Newcastle. A street in London retains the name. Over many parts of this road I have traveled in stage coaches. Over the Roman roads in Scotland, near the early home of my father and mother, I have often walked. These roads are in a state of excellent preservation to this day, and they will be for centuries to come.

The Bible gives many pictures of the actual construction of roads. In the Book of Isaiah, 40:3, 4, we have these words: "The voice of him that crieth in the wilderness! Prepare ye the way of the Lord, make straight in the desert a highway for our God. Every valley shall be exalted, and every mountain and hill shall be made low; and the crooked shall be made straight, and the rough places plain." This is really a poetically beautiful direc-

tion for road-making. The image of the great deliverance here promised to God's people from their long and painful captivity in Babylon is taken from the march of earthly conquerors and regal personages. The royal cavalcade is about to start on its journey; the horses are harnessed and mounted. In the wilderness now are heard the echoes of the herald's cry, proclaiming that every obstacle is to be removed, so that the royal procession may march without interruption and without inconvenience.

Proclamations of Eastern monarchs make us familiar with this method of procedure. When they went on a journey, and especially through an inhospitable country and over trackless deserts and mountains, they sent out their harbingers, their forerunners, their heralds, demanding that preparation be made for the advent of the king. In many circumstances this proclamation was an absolute necessity. It was often necessary to find fording-places over the streams, or to construct bridges; it was necessary to level the high hills or to find a road around them; it was necessary to fill up the valleys or over them to construct causeways. It was essential to open a way through the howling wilderness and over the trackless deserts.

Roads, in the modern sense of the term, were then unknown. The work of the Carthaginians and Romans as builders of roads was unknown to the prophet Isaiah. Later the Romans girded the civilized world with roads. They were long the road-makers of the world. The Roman Empire has passed away, but the Roman roads abide. They were more enduring than the thrones of the Roman emperors. The man who builds a good road is a great benefactor to any country, to any State or to any nation. Railways are great civilizers. Brigham Young made polygamy safe, as he thought, when he planted it virtually outside the reach of civilization. But the whistle of the railway proclaimed the eventual doom of this un-American and un-Christian custom.

In Isaiah 62: * * * 10, we have the words: "Cast up, Cast up the highway; gather out the stones; lift up a standard for the people." These commands find abundant illustration in the case of Semiramis, the legendary queen of Assyria, who founded Babylon and built the city with magnificence and splendor, with walls, gates, palaces and temples. The hanging gardens of Babylon tradition ascribes to Semiramis. She is said to have surpassed her husband, Ninus, in valor and glory. She seems to have been the Venus or Astarte of the Assyrian mythology. She is said also to have been very wise, beautiful and warlike. She conquered Persia, Egypt, Libya and Ethiopia, and invaded India. She made a triumphal progress into Media and Persia and Armenia. In the account of this journey we are told that in her march into Ecbatana she came to the Zareean Mountains, which were full of precipices and hollows. She could not make the journey without taking a great circle around the mountains. Being desirous of leaving an enduring memorial of herself, as well as of shortening the distance, she ordered the hills to be lowered and the valleys to be filled. She thus became the maker of a great road, and the road thus constructed is still called the "Road of Queen Semiramis." Her story is evidently an epitome of Assyrian history attached to the names of Ninus and Semiramis. Her name means a "mountain dove"; she is said to have been changed into a dove, and finally to have become a deity. Her greatest ambition was to be a road-maker. This seems to have been her sublimest achievement.

In the year 1775, Tresaguet, in France, and in 1820, Macadam and Telford, in England, introduced the system of surfacing carefully prepared roadbeds with broken stone. In 1830 France partially adopted Macadam's method; indeed, virtually all civilized countries adopted this plan of road construction. But previous to this date Napoleon, with an ambition for road-making equal almost to that of Semiramis, made his historic march into Italy. He declared that there should be no Alps to obstruct his progress with an army into Italy. He cleft a passage through the mountains, and thus accomplished one of the greatest engineering achievements up to his time. The road was constructed from 1800 to 1806, under Napoleon's direct orders. It is 42 miles long, and is carried across 611 bridges. Napoleon was assuredly a great road-maker.

In the United States, as in all countries, mountain trails yielded to bridle paths; they eventually became carriage roads. In 1806 the National Road, or Cumberland Road, from Cumberland, Md.,

reached the Ohio River. Thirty years later this road went to Vandalia, Ill., a distance of about 800 miles. Many parts of this road were macadamized. Now the bicycle, modern carriages, and especially the automobile, demand good roads. Roads, like the Lincoln Highway, stretch over great parts of the Continent. A Roosevelt Road, many believe, is the most impressive and enduring monument to our brilliant and immortal Theodore.

Deny a people good roads, and you deny them modern civilization. You cut all the sinews of their growth and power. Denying men touch with the world, you condemn them to stagnation, decay and death. Rob men of the schoolhouse, the mill, the market, the postoffice and the church, and you put them back hundreds of years in the progress of modern life. People are greatly wise who tax themselves freely for the construction of good roads. Good roads are not only social, civil, industrial and patriotic duties, but they are profoundly moral and strictly religious obligations. They are responsibilities which we bear to our fellow-men and to our God. Terence, a Roman comic poet, born in Carthage about 195 B. C., wrote a sentence which, when uttered in a Roman theater, evoked tumultuous applause. It was a sentence not unworthy of the Apostle Paul, and not unworthy even of Jesus the Christ. It was this: "I am a man, and I deem nothing common to man foreign to me." Every man who works for, pays for and prays for good roads is doing much toward the lofty attainment of the ideal life set before us by the eloquent, patriotic and humanitarian Terence.

Oil Will Aid Arkansas Glass Factories and Zinc and Manganese Development.

Batesville, Ark., February 28—[Special.]—The next big oil development in Arkansas promises to be in Independence county around this place. Oil scouts, geologists and oil men are coming and going every day. Leases are changing hands, and new territory is being covered. One rig is on the ground, three holes are contracted for and two or three more locations will be made public within a short time.

The Adams No. 1, the first well contracted by Fulk & Riffle of Little Rock, will be spudded in this week on the J. A. Luster property, two and one-half miles north of this place. They expect to get oil at this location at from 600 to 1500 feet in quantities of from 25 to 1000 barrels a day. Another rig is on the way to the field at this time, and will be put in operation as soon as it arrives. Fulk & Riffle own 12,000 acres of leases on the north side of the White River, and the acreage will be thoroughly tested.

T. J. Walbert and associates have a large acreage leased on the south side of White River, and are completing negotiations now which will insure a thorough test of that part of the field.

As long as 10 years ago gas was discovered bubbling up through the surface of the White River at this place. Samples of this gas were taken and analyzed, and it was shown to be natural gas off petroleum. A well on the Chas. Grigsby farm, five miles west of Batesville, which was drilled five or six years ago, gives forth a small flow of gas. This well is only 104 feet deep. The well is capped and a jet put on the gas burns approximately eight feet above the top of the casing. This year a number of wells, newly drilled, have shown small quantities of natural gas. A number of wells also contain so much oil that at some seasons of the year the water they furnish is unfit for domestic purposes.

The development of an oil and gas field at this place will reflect prosperity over the whole Upper White River Valley. The mountains north of here contain large and valuable deposits of lead, zinc, iron, manganese, glass sand and marble. The one big thing lacking in their development has been fuel in commercial quantities.

This territory would be very attractive as a location for glass factories if gas were developed in commercial quantities, on account of the gigantic bodies of glass sand which are adjoining. Five years ago an engineer making a survey of the raw materials on a property in Izard county at Ruddells reported 292,000 car-loads of high-grade glass sand that could be quarried from open quarries.

Gas would also mean zinc and manganese smelters at this place, and likely a small steel plant, as there is ample iron north of here on the White River Railroad to supply such an industry. The manganese necessary is right at hand.

Improvements in Oklahoma Oil Field.

Oklahoma City, Okla., February 24—[Special.]—Stealey & Whaley, oil operators of Wichita Falls, Tex., are reliably reported to have tapped a new oil pool in Comanche county, eight miles northeast of Lawton. The oil sand was found at 1200 feet, and drilling was suspended for setting casing when the sand was touched.

The Rock Island Petroleum Co. of Guthrie has taken over the leases and will deepen an incomplete test three miles northwest of Maud, Pottawatomie county, of the Nine Oil Co., which reports it found an important oil and gas sand between 800 and 900 feet.

The Lyons Petroleum Co., which found a new sand in Hughes county at 2600 feet, has drilled through the sand, which was 18 feet thick, and will deepen the hole to a sand expected at about 3100 feet. In case of failure to find this sand, the upper sand will be utilized.

Another cement casing base will be installed in the test of the Empire Gas & Fuel Co. in the southern part of Logan county. The base set originally, at about 3400 feet, crumbled when drilling was resumed and it was necessary to set a new base.

Salina, Kans., operators have taken an interest in the holdings of Judge J. T. Dickerson of Edmond, and will complete a well he started near there. In that vicinity Cox & Tucker, Yale operators, are under contract to start a well by April 1.

The early future of the oil industry brightened considerably recently when the Gulf Pipe Line Co. announced abrogation of its 50-50 pipe line run contracts, and that it thereafter would run all oil of producers connected with its lines. An increase of 25 cents in the price of North Texas oil, bringing the posted price back to \$2, also was encouraging news. Whether Mid-Continent crude will be raised in the same amount is not known.

The Gant & Parsons well, that opened a new producing region of the western part of Stephens county, is reported making 100 barrels an hour, and is the best well in Western Oklahoma. Near it the Hamon estate gas well is reported making in excess of 100,000,000 cubic feet daily. Twenty five locations for tests have been made in that vicinity.

The H. & H. Oil Co. of Muskogee has contracted for a second well in the vicinity of Stidham. The company found a pay sand there at a shallow depth, but probably will drill the second deeper.

Near Eufaula, the Empire Gas & Fuel Co. has its hole straightened and savings shut off preparatory to drilling deeper in a sand found at about 3150 feet in wildcat territory. The top of the sand has made 1,000,000 feet of gas.

Decline in Oil Production.

The American Petroleum Institute estimates that the daily average gross production for the week ended February 19 was 1,270,725 barrels, as compared with 1,273,200 barrels for the week ended February 12.

The estimated daily average gross production of the Mid-Continent (light oil) field, including Oklahoma-Kansas, North Texas, Central Texas and North Louisiana, for the week ended February 19 was 650,500 barrels, as against 654,095 barrels for the preceding week, showing a loss of 395 barrels.

The combined estimated daily average gross production of the Southwest fields for the week ended February 19 was 763,225 barrels, as compared with 771,345 barrels for the preceding week, a loss of 8120 barrels.

Oklahoma-Kansas is credited with a daily average gross production of 360,960 barrels, a loss of 2260 as compared with the preceding week. North Texas shows a gain of 605 barrels, Central Texas a gain of 350 barrels. Burk Burnett, in the former field, is estimated to have gained 500 barrels in daily average production, and is reported at 58,000 barrels. Electra is steady at 10,250 barrels. In Central Texas, Stephens county, Ranger and Desdemona are reported as unchanged at 110,000, 15,000 and 7000 barrels, respectively. North Louisiana is credited with a loss of 2200 barrels. Claiborne parish is estimated to have declined 2850 barrels. Caddo heavy shows an appreciable gain. In the Gulf Coast Goose Creek gained 1000 barrels; Hull declined appreciably, and is estimated at 35,000 barrels; Blue Ridge declined from 1700 to 1200 barrels; West Columbia is estimated at 27,500 barrels, as against 29,000 barrels for the preceding week, and Humble is reported at 7800 barrels, a gain of 300.

IMPROVEMENT IN TEXAS OIL FIELDS.

Prices and Output Show Considerable Betterment—Further Advance Looked For.

Austin, Tex., February 28—[Special.]—An improvement in the oil industry as applied to the Ranger, Breckenridge, Desdemona and other fields of Eastland, Stephens and Comanche counties of North Central Texas has taken place during the last several days. This change had its beginning with the announcement of the Humble Oil & Refining Co. that it would pay \$2 a barrel for the light crude production of these fields, as compared with the bottom price of \$1.75 which was recently reached. Other companies met the increase of 25 cents a barrel.

This raise of the price was followed by the announcement by the Gulf Production Co. that it would purchase the entire output of the wells with which its pipe lines are connected. This action did away with the 50 per cent reduction of purchases, and it is expected the other pipe-line companies will cancel their restrictions in this respect.

The general opinion is expressed that prices for the light crude product will within the next few weeks return to something near their former high level, not only in the North Central Texas fields, but in other parts of the country.

Strength is also shown in the price of fuel oil. During the last three weeks the price of this product has increased from the minimum low level of 75 cents a barrel free on board at the refinery to the maximum of \$1 a barrel, with 90 cents a barrel as perhaps the ruling price. It is explained that the fuel-oil supply at this time is far from being equal to the demand. Paradoxical to these conditions, the price of gasoline at most Texas points has been reduced from 25 to 23 cents a gallon, and many dealers predict that another 2-cent cut may be made soon.

In the Breckenridge district an acute water shortage for drilling wells is retarding development work. It is stated that 100 wells were forced to shut down on this account, and that approximately 1500 men were temporarily thrown out of employment.

As a result of retarding conditions, the production of the Stephens county district, including the Breckenridge field, shows a falling off of about 4000 barrels a day, as compared with what it was 10 days ago. The daily output is now about 104,000 barrels a day. In the South Bend field gradual increase of daily production is reported. The Prairie Pipe Line Co. is completing a pipe line into the new district, and its arrival there will cause about 20 wells that are now shut down at top of the sand to be brought in.

In the Burkburnett and adjacent fields no completions of importance have been made during the last several days. The Ibex Oil Co. has brought in a 300-barrel well in Shackelford county, about 20 miles from the nearest production in Stephens county.

Construction Begun on Carson Refinery.

New Orleans, La., February 28—[Special.]—Work on building the refinery of the Carson Oil Co. of Chicago has started. The company will be known in Louisiana as the Petroleum Export and Import Corporation. The 500-acre site is 16 miles above New Orleans, on the river, near the town of St. Rose. This is within the industrial suburbs of New Orleans.

From present indications the plant will cost more than \$750,000. Contracts have been awarded as follows: Twenty storage tanks, to William Graver Tank Corporation of Chicago, \$250,000; wharf, N. G. Scott of New Orleans, \$150,000; conveyor system, Lamson Company of Boston, \$100,000 or more.

The buildings that are planned for immediate construction include two warehouses, 475x60 feet; pumphouse, boiler-house, power-house and machine shops. Contracts have not been awarded, but it is estimated that this construction will total around \$250,000.

In addition there will be numerous smaller contracts.

The plant will manufacture tin cans, for it will go after the package trade. The conveyor system is to load the ships with these containers.

Oil will be purchased from independent producers, and the foreign trade will principally be catered to.

TAMPICO OIL RECORDS BROKEN.

Shipments From Mexican Field Exceed Former Output Despite Pessimistic Reports.

Tampico, Mexico, February 26—[Special.]—Contrary to earlier pessimistic reports and predictions that some of the more productive oil fields of the Tampico region were going to salt water and a possible big decline of the industry, the statistics of shipments for the month of January, which have just been compiled, show that all records for any single month were broken.

The total shipments for January were 18,481,136.99. The month's shipments were made by 20 different companies, and there is to be noted an enormous increase in the shipments of one company—the France & Canada Company—which sent out by water 228,462.01 barrels in January, as compared with 14,620.05 barrels during the preceding month. The total increase of shipments in January over the shipments of December was 872,433.90 barrels. The shipments were made through the ports of Tampico, Port Lobos and Tuxpan.

The Huasteca Petroleum Co., as usual, led the list with 3,209,716.54 barrels. The Transcontinental Petroleum Co. kept second place with 2,906,989.91, and the Mexican Aguila (Eagle) Oil Co. third with 2,243,403. Five other companies shipped in excess of 1,000,000 barrels each.

Oil Interests Merge—American Fuel Takes Over Properties in Texas and Louisiana.

Dallas, Tex., February 28—[Special.]—The American Fuel & Development Co., which has just been incorporated with a capital stock of \$5,000,000, has taken over the holdings of the Garrison Oil & Coal Co., with an invoice valuation of \$2,500,000. These properties include leases on 3659 acres of land in the different oil fields of North Central Texas and Louisiana, and 1200 acres of coal land at Timpson, Tex., with a contract with the Southern Pacific Railroad for 18 months of huge daily supply.

The recently acquired holdings of the American Fuel & Supply Co. include 52,000 acres in Crane county, 22 miles north of Fort Stockton, where several wells have earned commercial value at less than 100 feet; 220,000 acres in a solid body in Pecos, Brewster and Terrell counties; 155 acres in Stephens county, all proven; 16 acres in Eastland county, which are bearing royalties; approximately 50 acres in the Pleasant Grove district, also bringing royalties.

Deals are pending for the purchase or lease of 400,000 acres in Old Mexico and 32,000 acres in a district already equipped where wildcats are promising.

Sterling P. Strong of Dallas is president of the American Fuel & Development Co.

Oil Refinery Production for December, 1920.

Washington, February 28.—The Bureau of Mines' report of refinery statistics, compiled by H. F. Mason, for the month of December gives the production of gasoline during this month as approximately 464,000,000 gallons. This is a daily average of 14,980,431 gallons, or about 107,000 gallons per day less than the production for November. The daily average for December, 1919, was approximately 4,000,000 gallons less than the daily average for December, 1920.

Refinery stocks of gasoline at the end of December amounted to 462,000,000 gallons, an increase of 108,000,000 gallons over the stocks at the end of November. Stocks at the end of December, 1919, were 16,000,000 gallons less than the stocks at the end of 1920.

Production and stocks of kerosene show a slight decrease as compared with figures of November. Stocks of kerosene are about 60,000,000 gallons less than they were on December 31, 1919.

Gas and fuel oil production shows an increase of 37,000,000 gallons over the production for November. Stocks of this oil have increased about 123,000,000 gallons over the stocks at the end of 1919.

Production of lubricating oils remain fairly consistent. Stocks of this commodity increased 18,000,000 gallons over the stocks reported at the end of November.

The month of December shows a total of 328 refineries operating, with a daily capacity of 1,714,395 barrels of crude oil.

The Trade Slump, Its Cause and Cure

[Arthur Kitson, president of the British Banking Reform League, a leading manufacturer of Stamford, England, whose views on deflation were published in the Manufacturers Record of January 6, sends us another article on the same subject, and in a separate letter writes:

"As the present trade depression seems to be affecting all nations alike it would seem that there must be one single and distinct cause, and in my judgment that cause is none other than the suicidal policy which is being adopted by nearly all countries at the suggestion of the money lenders and their hirelings, the professional economists, viz., the deflation of currency and credit."

"I am taking the liberty of enclosing a copy of an address that I delivered before the Birmingham Business Club last night. I hold the deflationists entirely responsible for the present trade depression which is creating unemployment universally. This policy has always precipitated the same disasters in every country where it has been the practice during the past century. I am glad to see you have given some space in your most interesting magazine to this discussion, and I am sending this with the hope that it may throw further light on the subject. I should be greatly obliged if you could spare me three copies of your issue of November containing the article by my friend Senator Owen."

"Some of our bankers are making the assertion that America is not feeling the effects of this policy in the way that we are here, but, from the information I am receiving, I have come to the conclusion that you are having as bad a time as we are. Will the people never learn the lessons of history? Apparently the only way in which they can be taught anything is by the 'calamity method.' For the past five years I have been warning our Government and the Allies generally of what would happen after the war and the dangers that were in front of us by reason of the threats of the money-lenders to restore what they call the 'good old gold standard'—one of the most stupendous frauds that the world has ever known."

The address by Mr. Kitson outlines conditions in England exactly as we have them here, and from the same cause, viz., deflation, which has brought poverty to millions and well-nigh wrecked all property, but the international bankers and the Federal Reserve Board still cry all is well, when the truth is all is wrong for everybody except them and their deluded followers.—Editor Manufacturers Record.]

By ARTHUR KITSON of Stamford, England, President the British Banking Reform League.

The present trade slump is not an entirely surprising or unexpected event to certain people. It had been predicted by two or three writers and economists, and particularly by certain financiers more than a year ago, when business was booming and when there seemed a long period of prosperity before us. I myself ventured to prophesy over four years ago what might happen, but I made the fulfilment of this prophecy conditional upon the adoption of certain financial policy, a policy which the great money-lenders were threatening to re-establish. Two or three professors also gave reasons why we must expect a long period of business disaster. But they, like their employers, the financiers, and like the boy who, having ignited the fuse of a firecracker, said there was soon going to be an explosion, were prophesying on what they knew to be a sure thing. Apart from these instances, it is both amusing and amazing to read the varied reasons offered by our journals—reasons which have no earthly connection with the subject. We are told by one of our city editors that trade moves in cycles, and a period of trade depression is now overdue! Which reminds one of the anxious mother who said she feared there was something unnatural about her last child, as, unlike the others, it had never had the measles. Another writer says that wars are always succeeded by bad trade, and there is no use in worrying about it, and he leaves it at that. Another seeks to revive the late Professor Jevons' theory of sun spots. Jevons, you may remember, tried to show some connection between sun spots and bad harvests. And as the failure of the crops would unquestionably have an adverse influence upon trade in general, he hoped to place the blame upon the shoulders of Providence.

Providence has no doubt a good deal to answer for, but it is not responsible for our foolish national politics and economics. And, unfortunately for Jevons' theory, several of these periods of industrial depression have been those during which the harvests have been most abundant. Trade and commerce are created and controlled by human agencies, and for every economic or political event there is an economic or a political cause. Herbert Spencer once said that human intelligence is marked by our ability to detect causes, and if we apply this rule to our politicians, our press and our professors, we shall be compelled to regard them in the realm of economic science of a somewhat low order. These economic questions are regarded by the general public with both awe and superstition—thanks to the foolish opinions offered by our newspapers. I maintain, and shall endeavor to prove, that the present trade slump was unnecessary and has been deliberately created by the Government's irrational policies, and I hold the present Chancellor of the Exchequer and his Treasury officials mainly responsible for the ruin and misery which the country is now beginning to experience. I contend that the Government has the means and power to stop the slump from going any farther.

and can, by reversing their policy, restore our trade to its former prosperous condition.

Let us first inquire whether there was anything connected with our industrial and trade conditions after peace was declared likely to lead to our present disasters. There are three prime factors essential for trade-prosperity: The first is a great demand for goods. The second is the means for manufacturing, producing and supplying such goods, and the third is the necessary means of exchange to enable those desiring goods to purchase them. In other words, these three factors are demand, supply and credit. Wars usually create an enormous demand for the replacement of property destroyed. Periods succeeding wars, far from being periods of trade depression, ought logically to be periods of trade revival and prosperity. The war that we have just experienced has left the world poorer in many respects, and we know that there has been, and there still is, an enormous unsatisfied demand for commodities of every description. We have only to consider the housing question or the question of clothing, the food supplies and the supply of a thousand and one articles of manufacture which the public require, to realize that, so far as the public necessities are concerned, there is every reason why business should be in a very prosperous condition. For demand is the parent of industry. So far as this factor is concerned, there is certainly no reason for the trade slump.

Let us look on the other side, and see how matters stand in regard to the factors of production. First we have labor. In spite of the unrest in labor circles, there is a crying demand for work on the part of thousands, and the percentage of unemployed has risen during the last few months to an enormous extent. During the war we had practically no involuntary idleness. Everybody who wanted work could get it. So long as the main business of the world was the destruction of life and property, there seemed to be no dearth of willing hands and there was employment for all; but now that we have entered a period of reconstruction—of recreating wealth—our whole political and economic system seems to fail us. The cause of the trade slump is, therefore, not due to labor. I admit that the continued unrest and the cry for higher and higher wages does to a certain degree unsettle conditions and prevent that continued progress which is necessary for maintaining trade prosperity. But, in my opinion, this unrest is itself a result of the main cause of this trade depression.

Another factor in production is raw material, or what in economics is called "the land," and here nature has certainly not rebelled. We have only to plant the seed and to till the soil, as in previous years, to get abundant harvests, and we have only to dig into the earth in order to extract the necessary metals, coal and minerals essential for the manufacture of all kinds of products.

Another factor is capital. Here again there is certainly no

shortage sufficient to cause depression in business. On the contrary, capital—in the form of machinery, tools and plant—is actually rotting for lack of employment. It has become the fashion for some writers to explain present events by saying that as a nation we are very much poorer than we were prior to the war, and that we have been living on our capital. This statement is not wholly true. In fact, it is in the main entirely false. By capital we usually mean the means of production, i.e., the means that have been created by labor and raw material. Now, it is a fact that not only were we able to carry on the war during those four critical years, but that during that period we built up numerous gigantic works, and the majority of those that were in existence prior to the war were greatly extended. We increased the number of our machines, lathes, looms, tools, etc., so that when the war ended we were able to turn out a far greater volume of goods than at any period in our history, and those who talk about the war having brought us to the verge of bankruptcy are talking nonsense. Not only did we wage a war in which we lost hundreds of thousands of precious lives and blew away hundreds of millions of pounds' worth of munitions and carried on a work of destruction to a terrible degree, but we actually paid for the war during the period of the war! The debts with which we are now burdened are solely due to the ridiculous and insane financial policy that was pursued by our ignorant rulers. Owing to the fact that our financial system is based upon the most childish theories and upon fallacies which have been again and again exposed, we find ourselves today burdened with a colossal debt due mainly to a number of our own people who were invited to exchange their inferior credit for the far superior national credit, and upon which our generous Government agreed to pay interest charges!

I have already shown (in "A Fraudulent Standard") how the war might have been financed without incurring this huge debt, and so have avoided these appalling interest charges. Investigation proves that so far as the factors of production are concerned, and so far as the demand for goods is concerned, there is not the slightest reason why the present slump in trade should have occurred. Where, then, is the trouble? Modern industry has been made to depend not only upon the factors that we have already mentioned, but upon another, namely, the factor of credit which enters into exchange. Every business today is based upon the credit which its owners can command, and this has to be established with some banking-house. Hence any injury to credit affects the whole economic structure. We do business as long as the money holds out. Money or credit (which is practically the same thing) may be likened to the water that flows through a canal and which carries vessels from one place to another. Similarly, credit causes the flow of goods from one part of the country to another, and when credit gets scarce, it is like the water in the canal running out so that the vessels are stranded. Scarcely had the war ceased when certain financiers started an agitation against our paper currency, which had enabled us to carry on successfully the war and to maintain our industries, and they were determined to reduce the volume of currency. Owing to the general ignorance on this subject, they were able to impose their ideas upon the press and to make the professors of the universities "toe the mark" and enlist their services on behalf of these financiers. For a short time the Chancellor of the Exchequer seemed to be able to keep himself free from their pernicious influence, but it appears that ultimately, with the connivance of the treasury and inland revenue officials and under the influence of certain bankers and professors, Mr. Chamberlain allowed himself to be driven to the adoption of their policy.

In a recent address Mr. Chamberlain spoke as follows:

"That brings me to the fact that I require co-operation in every quarter in order to maintain the policy, on which the Government has set its heart, of first stopping further inflation and then beginning gradually to deflate. I need the co-operation of the financial community. What has happened is that as fast as I have stopped creating credit they have been creating credit, and that the extent of the advances made to trade and to private individuals is such as to endanger and to reduce the amount of Treasury bills. I cannot view without some concern the extraordinary expansion of business in the promotion of companies. If I was sure that all this money really resulted in increased production, I should find some consolation, but I am convinced that the time has come when a part of it only creates increased competition for the limited supplies of labor and material which are all that are available."

And his only remedy for this speculation is to ruin trade and

industry indiscriminately and throw thousands of workers on the street to beg or starve;

This is the policy that some of us foresaw would be attempted by the money-lending interests, and it is this same policy which has been pursued after every war, and which, I maintain, is the real cause of these periodical trade slumps. Had the Government carried out its original promises, had it resisted the demands of the usurers, and had the banks continued to support industry as they did during the war, the present condition of affairs would never have happened. Now, let me read you a few extracts from a work I wrote in 1916, and which was published under the title of "A Fraudulent Standard"

Introduction and a Warning.

"The basis upon which all our industries, trade and commerce are conducted is the legally established 'standard of value' represented by the golden sovereign or 'pound,' which is supposed to 'measure' the value of all labor products.

"As will hereinafter be shown, this 'standard' is founded upon a most egregious fallacy, and although it occupies a position in the domain of trade of similar importance to that of the standards of length, weight and capacity in the industrial world, unlike them, it is extremely variable, and purposely made so by the great financiers of this and foreign countries, who are able to juggle with prices to an almost unlimited extent, and by so doing reap enormous fortunes from the producing classes. It has placed the fortunes of all engaged in trade and industry wholly at the mercy of the world's money dealers. These men exercise, by means of the legal privileges accorded to gold and the banking profession, far greater influence over economic conditions than any potentate, ruler or government. They have the power to stimulate industrial prosperity, and to destroy it by increasing or diminishing the available gold or currency supplies, as well as by the mere manipulation of credit. They are the world's real autocrats.

"Just now a few of their number are contemplating the most gigantic 'deal' that has probably ever been conceived, and one which, if perpetrated by any other class of the community, even on a very much smaller scale, would be denounced as barefaced robbery.

"And it is in regard to this projected crime particularly that I desire immediately to sound a note of warning to the British public as well as to those of all our Allies engaged in the present war. This 'deal' is nothing less than doubling the national, and, incidentally, all other debts by doubling the present value of our monetary units!"

"The object of this is to double the value of their war loan investments, regardless of the terribly disastrous industrial and social results which must ensue. This robbery will be accomplished, if it is not checked in time by public sentiment, in a perfectly legal manner by a complacent Chancellor under the guise of a measure for the public welfare, for the sole purpose of removing 'inflation' and reducing prices which have risen mainly through the creation of the very currency and credit constituting the war loans. The measure will aim at restoring what the money dealers term our 'good, sound, honest gold currency' by destroying the Treasury notes and reducing bank credit to its pre-war proportions. The effect will naturally be to double the purchasing power of the pound at the expense of every wage-earner, producer, merchant, manufacturer, tradesman and taxpayer in the country."

"The great banking and financial companies that have invested large sums in the war loans will thus, by the mere stroke of the pen, enormously add to their fortunes without any further expense or effort on their part.

"Let us, however, clearly understand what this conspiracy means to our social and industrial conditions. You cannot increase the purchasing power of money without decreasing the value of all goods and services proportionately. If the money-lenders are granted their demands for the 'dear' pound, the merchant, the manufacturer, the farmer, the wage-earner, will all be compelled to sacrifice the value of their goods and services to a similar extent.

"If the gold currency is restored and prices put back to where they were four or five years ago, wages will have to go down with them.

"You cannot reduce prices generally, as certain politicians are urging, and retain the same banking facilities and the same currency circulation. Now, mark what will inevitably follow such an attempt: To reduce prices you must reduce the volume of the

currency, including bank credit. This means reducing banking accommodations, overdrafts, loans, etc., and consequently curtailing trade and depressing industry. It means reducing employment and both wages and salaries. This will add to the depression by reducing still further the demand for goods, since the wage-earners are the great consuming classes, and if you reduce their wages you reduce their power of purchasing commodities; in short, reducing prices, or what is the same thing, raising the value of money, means trade depression, lockouts, strikes, emigration, starvation, pauperism, riots, with the possibility of civil war!

"The crime proposed is not a novel one. It has been perpetrated in all countries, usually during their most serious crises. Moreover, the men who do these things are usually the pillars of society, whose names figure in the highest circles, who support many of our national charities, and after plunging hundreds of thousands into social want and misery, ease their consciences by donating a mere fraction of their ill-gotten gains to some church, hospital or orphan asylum!"

"At present the country is indignant over the disclosures regarding profiteering. But the fortunes made by all the shipowners and commodity merchants since the war started are a mere pittance compared to the profits which the financial magnates will win by raising the value of the monetary pound."

"It may be asked, 'Will not the Government and Parliament, particularly, watch the people's interests and protect them from this threatened financial raid?'

"The answer is that neither Parliament nor the Government will move a finger to save the public unless the public protest is made so effective as to engender fear in the minds of the majority of the members. This is not so much the result of corruption or any lack of honesty on the part of the average politician, as to his incredible inertia.

"When the opening of the great conflict suddenly rent the veil which had served to hide the truth from the British public, it brought us all to the realization of our two greatest dangers, the one foreign and the other domestic.

"The former was our mortal enemy, with the organized and well-drilled hatred, ambition and unscrupulousness of his 70,000,000 subjects under the leadership of a clever, cunning, blood-thirsty fiend utterly devoid of any moral or humane sentiment!"

"The other was the lofty and appalling conceit, ignorance, inefficiency and apathy of our so-called governing classes, comprising all shades of party politics. And of these two, the latter will most probably prove to have been the more dangerous and costly in the long run."

How literally these predictions are being fulfilled may be seen from the events that are now happening.

The same events are now happening in America, and from the same cause. Only last week I received a letter from a friend in one of the Western States, in which he writes as follows:

"The deflation advocated by our financiers and professors has been perpetrated to a considerable degree, and in this region there is almost no money at all. And this is probably the richest farming area in America. The banks have refused credit to almost all farmers, regardless of their solvency, since June, just at the season when expansion of credit has been urgently needed for harvesting and moving crops. This contraction has been exaggerated by a suit by the Associated Mortgage Banks against the Federal Reserve Farm Loan Banks, by which the farm loans at 5½ per cent were stopped. The regular banks and mortgage companies don't like competition at 5½ per cent, the regular bank interest here being 10 per cent.

"Professor Kemmerer* et al. consider the welfare of the people of much less importance than maintaining a certain large percentage of gold reserve, and while predicting an indefinite period of depression as a consequence of deflation, yet hold deflation necessary. In writing to him on Sunday I expressed surprise that with a clear realization of the awful results of credit contraction, he could approve of it. I held that such a measure is wholesale murder and much worse, as it always dooms thousands of men and women to suicide, hundreds of thousands of women to prostitution, transforms multitudes of home-owners into tenants and tramps, wipes out the savings of old people, adding them to the army of paupers, and brings about an appalling aggregate of

*Professor of economics at Princeton, N. J., and a strong advocate of deflation.

human misery! And that there is absolutely no excuse for it, as the paper money of this country is absolutely inconvertible; nobody can obtain gold coin for even a gold certificate, which is a warehouse receipt; gold has gone out of commission as money, and the people at large have no use for it, wouldn't buy it if they had the money, so the gold in cold storage is immune from them. The only parties who ever loot the national reserves are the financial concerns that profess most pious concern for their maintenance. Instead of destroying the country on the pretense of protecting the gold, it should be just as easy here as in France to refuse gold to would-be looters."

Precisely the same deflation policy is being pursued in India, Africa and in Australia, and with similar results. The Times of India actually boasts of this policy, which means industrial ruin and revolution.

The following is from the Daily Mail:

"The Times of India, in comparing the financial strength of the country with that of other countries lays more stress on the seriousness of the problem which the latter have to face in the volume of the paper currency, unsecured otherwise than on the general credit of the State. Since the war, it is claimed, the Indian paper currency has 'returned to a state of health to which we know no parallel in any of the belligerent States.' After drawing attention to the decrease of the circulation and the increase in the metallic reserve, the journal continues: 'These are great and welcome changes; they indicate a financial strength in relation to the paper currency which the strongest and wealthiest State might envy.'

What have been the results of these financial changes which the Times of India welcomes so vociferously? The public of India are reducing their demands for goods and orders sent to this country are being cancelled wholesale. The Indian docks are glutted with goods which the natives are unable to take through refusal of the banks to supply further credit. Unemployment is general, trade is depressed and revolution is in sight! And this is the same complaint we are receiving from all our colonies!

What excuse do these so-called deflationists offer for their mad policy? They tell us that high prices are wholly the result of our paper currency. They tell us that our currency has become inflated during the war, and that if we want to have prices down to a normal scale, we must reduce the volume of the purchasing power of the people. The money that was issued during the war was absolutely essential to carry on the manufactures of the country, and particularly the supply of munitions. A man who makes shells and guns has to be paid his weekly wage precisely the same as the man who makes saucepans, kettles or lamps for household use. It takes just as much currency to finance the munitions of war as it does the munitions of peace. But there is this difference, that when you have manufactured your war munitions you send them away and destroy them so that you have nothing to represent the money which was used in making them except the smoke of battle. On the other hand, when you make the munitions of peace, you have substantial wealth to represent the wages paid. Consequently, the currency that is used for making munitions of war does tend necessarily to raise the scale of prices of ordinary commodities. But what other method could you adopt for carrying on a war? If we had not resorted to paper money we could not have made munitions, and we should today have been under the control of Germany! The money that was so issued for munitions was paid for in labor and material, and necessarily became a debt, and this debt is represented by the increase in the scale of prices. But you cannot get rid of this without doing injustice to millions, and this proposal to deflate the currency is nothing more than a repudiation on the part of the Government of the debt which is due to the producing classes and to the working classes particularly.

But is it really true today that our currency is inflated? What is currency inflation? It means an oversupply of general purchasing power. It means that the facilities for purchasing goods are greater than the quantity of goods available and the means for producing goods themselves. Is this true? Supposing someone were to tell you that there was an inflation of the sugar supplies. How would you disprove this statement? Naturally by pointing to the present price of sugar and to confectionery in which the supply of sugar enters very largely. Apply the same test to the currency and to credit. If there was an oversupply of currency, the rate of interest would be low, and it would be comparatively easy to get money. Instead of this, it is a fact that the rate at which money is loaned today is higher than it has been for a century, with but one or two slight exceptions. Indeed, we are paying more for our money today than our forefathers did 150 years ago.

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MANUFACTURERS RECORD.

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Ask the average merchant and manufacturer what troubles him most today, and he will tell you that it is the lack of credit facilities and the difficulty of collecting accounts, and this has been the case for some months past, and it is getting worse. If credit were easier and cheaper, far more goods would be turned out than is now possible. And the value of the goods would exceed the nominal value of the credit necessary for their production. And by such increase in production we should soon see a gradual fall in prices—the only safe and rational method for "deflating" the price level. Is it not a fact that the hardest problem that the country has to face at the present time is how to raise money? And yet, we have professors and financial writers coolly telling us that our currency is inflated and that the supplies must be contracted! One wonders with what form of lunacy these men have become afflicted!

Of course, this deflation policy hits all classes except the money-lenders and the salaried people, who gain by the increase in the value of their money and credit, and this is the real object of the deflation movement. It is one of the most infamous examples of wholesale robbery on record, for it means that with the deflation of currency every debt incurred during the war is inflated. Every pound that was borrowed during the war, whether by the Government or by individuals, and which is still owing, is being inflated by the deflationists. Take, for example, the war loan and the national debt, which now amounts to over £7,000,000,000. This debt was incurred in what the deflationists call "cheap pounds." They tell us that our present pound is worth only 8 shillings of the pre-war pound. If this is so, then in repaying the debt and in paying interest on the loans, the taxpayers should only pay pounds of the same value as those borrowed, but the money-lenders are not satisfied with this. They tell us that we must revert to our gold standard so as to raise the value of the pound to 20 shillings, the result being that those who lent money to the Government and bought war bonds are to receive not merely the interest agreed upon, but they are to be actually paid pounds worth two and a half times those with which they bought these bonds! This is the game that is being quietly but persistently played by the great financiers. This is the swindle which our press, like the Times, the Daily Mail, the Morning Post, the financial press, the professors and our politicians are supporting!

It means that in place of repaying the debt according to the dictates of justice and fairness, the taxpayers of this country are to be swindled to the extent of more than double the amount that the Government borrowed! The same applies to debts incurred and loans contracted by business firms and private individuals during the war. It includes debentures, mortgages and all similar forms of indebtedness. It means that if a man borrowed sum equivalent to one year's labor, he will have to give from two to three years of his labor to repay it, in addition to the interest charges. This policy is being pursued not only in this country, but throughout the world, and this is the policy that has always been pursued by what is called "high finance." And it will create universal failures and bankruptcies. It will mean the downfall of this country. This policy was pursued after the Napoleonic Wars through the connivance of the head of Lloyds Bank, the notorious Lord Overstone. He amassed a vast fortune out of the misfortunes that he was able to inflict upon the country through the ignorance of Sir Robert Peel, who was then Prime Minister. It was pursued by the American and European financiers after the American Civil War, so that the American people actually paid their war debt three and four times over, apart from the interest charges through the deflation policy pursued by the connivance of the American politicians.

I do not wish to insinuate that all the officials and ministers who are responsible for this policy are knowingly perpetrating this gigantic fraud on the public. I believe that many of them are absolutely ignorant of the effects of their policy.

A story is told of Disraeli during his term as Prime Minister. When asked by the late Lord Rosslyn whether he did not have great difficulty in selecting a suitable man for the office of Chancellor of the Exchequer, replied that that was the easiest office of all to fill. He said: "All I have to do is to select a man who is very ignorant and has a bad temper." He added: "He must necessarily have a bad temper so as to be able to say 'No' to the numerous applications made him for money, and he must also remain ignorant of finance, otherwise he might do his thinking for himself and so upset his department chiefs." This was not a mere

fanciful description of the qualities that our Chancellors have possessed. On the contrary, it is a very accurate description of the majority of them. And this is the terrible danger that we are in today, namely, the appalling ignorance of our Government officials who have control of our finance and of our trade policy. Sir Robert Peel was regarded by his own father as a "financial lunatic," and, judging from some of his correspondence, it is evident that he had grave doubts regarding the wisdom of his financial policy, and particularly of his Bank Charter Act of 1844.

It is related of one of our recent pre-war Chancellors that during a meeting of the City Bankers he told them it was his ambition to raise British credit to the highest point. "I want," he said, "to raise our credit to 5 per cent and keep it there." Noticing a smile on the faces of the bankers, he asked if there was anything impossible in his statement. He was then informed that British credit was already much higher; that it was not even 4 per cent. "That," said the Chancellor, "is what I complain of. I want to raise it to 5 per cent!"

In the hands of men of this character, how is it possible to have anything like a sound system of finance? I maintain that the trouble with trade at the present time and the main cause of the trade slump throughout the world is the contraction of the currency and of credit, which is being carried out at the instigation of the money-lenders! And unless the business men of this country combine to put a stop to it, we shall have a long period of industrial stagnation, with bankruptcies, ruin and social misery!

We have been told by certain "authorities" that we must retrace our steps and go back to our pre-war conditions in order to get trade into its normal channels. What was the condition of affairs prior to the war? We had millions of people on the verge of starvation: unemployment was rife; our banks were supporting and building up German industries which were crippling British industries. Our home industries were neglected, whilst foreign investments were sought after, and the best use that we could make of our young people was to send them either to our colonies or to America. Germany was undermining us in every direction, and, as Professor Houser says in his well-known work, entitled "Germany's Commercial Grip on the World," if Germany had only pursued her policy of peaceful penetration the wealth of the British Empire and of the world would have been within her grasp within the next 20 years!

Mr. Lloyd George and his Government are very much like a railway directorate who, by changing their engine drivers and stokers, try to make the public think they are going to take them to a new country whilst running them over the same old railroad tracks. A mere change of locomotive drivers does not effect any change in the route. The Government has set up scores of committees to inquire into the industrial situation after the war, and the men put on these commissions have had little or no imagination whatever, and their ideas and ideals are merely those of pre-war times. For instance, in the matter of finance. The men chosen to advise the Government are bankers and money-lenders who are quite satisfied with pre-war conditions. They could ask nothing better than the conditions prevailing at the time which placed the whole of the country's industries at their mercy. Why should they seek to alter conditions? Similarly in other departments. The men who are most interested in preventing any change are the men that Mr. Lloyd George seems to have selected as his advisers. Is it any wonder that we have all this labor unrest and disappointment?

There is one remedy for the present trade slump—a remedy which would prove instantly effective. If the Government will announce that it is prepared to support the banks and to advise the banks to support industry by offering credit facilities to all sound industrial enterprises, and to refuse credit to speculators and gamblers; if they will instruct them to carry out the sacred promises they have made to accept war bonds as a basis for credit up to 90 per cent of their full face value, the present trade depression would instantly cease and we should have a revival of that prosperity which we had a year ago. But what about prices? Would not prices continue to advance? The Government would be quite justified in fixing a limit to prices in every industry, as it has done in connection with various food supplies. There is no reason at all why the Government should not, after proper consultation with the leaders of industry, set a limit which would save the country from further exorbitant charges. As soon as industry had overtaken the demand for commodities, the trend of prices up-

ward would cease and would commence to go down. This is the true remedy for high prices, namely, to increase the supplies of commodities. But even if prices are not fixed by the Government, is it not infinitely better for a country to suffer from a high price level than for millions to be engulfed in misery and starvation and run the risk of revolution and bolshevism, for this is the danger to which we are now exposed? The workingman of this country will never consent to go through another such period as the "hungry forties," which was the direct result of the same policy of deflation pursued under Sir Robert Peel.

Those who have read the Gemini Letters, which were published at the time of the great industrial crisis in the thirties and forties, will remember that what were known as the Birmingham Economists attributed the whole of the social and industrial evils of that time to the policy of deflation, and it is astonishing that the people of Birmingham should turn a deaf ear to the gospel that was so eloquently preached at that time. It should also be remembered that these periods of depression do not last merely two or three years. When our politicians talk of "retracing our steps," have they considered the time that it will take for trade and industry to regain their normal conditions? A deflation period, with its disastrous effects, started about 1819 and continued without interruption until 1850, a period of about 30 years, and it was due to the discoveries of gold in Australia and California which permitted the increase in the currency, and therefore in credit, that saved England at that time from perishing as an industrial power. The same thing happened in America after the Civil War. The insane deflationists created a period of industrial misery and stagnation that lasted from 1870 until 1897.

If our present financial and trade policy is pursued, even though we escape the horrors of a revolution, we shall not recover our industrial position under 25 or 30 years. Is this an experience that any sane man can look forward to without a shudder?

There is another side of this question which should not be overlooked, and that is the moral issue. Today we are employing both the military and the police to track down a gang of incendiaries and assassins who have been terrorizing the inhabitants of our unfortunate sister island. The men who have instigated this policy of terrorism are said by their admirers to be men of high ideals whose aim is the political freedom of their countrymen. But whatever their ideals and ultimate objects may be, the law rightly judges them by their actions and makes them responsible for the effects of their teachings. If the same law were applied to our politicians, financiers, journalists and economic professors, a number of well-known public men would today be awaiting their trial in the criminal court for conspiracy against the public welfare. Indeed, if we judge the magnitude of a crime by its results, we must pronounce a policy which reduces millions of people to penury, which bankrupts thousands, drives scores to suicide and thousands more to lives of shame and endangers the safety of an Empire in an infinitely greater crime than anything now being witnessed in Ireland. The policy of currency deflation is one of starvation, of murder, of incendiaryism, of industrial ruin and social misery! "You take my house when you do take the prop that doth sustain my house; you take my life when you do take the means whereby I live!" "I am not looking for a crash," said Professor Kemmerer of Princeton University, one of the great American deflationists, "I am looking for a long period of trade depression!" Knowing, as that professor evidently does, the terrible effects of the policy he is so strenuously advocating, I say that he and all others engaged in the same wicked task ought to be charged with criminal conspiracy and held responsible for the disasters and crimes which their teachings are now breeding and which will presently ripen into action. Deflation, like bolshevism, spells anarchy. "The children born of it are fire and sword, red ruin, and the breaking up of law." It is the patriotic duty of every good citizen to fight this suicidal policy to the bitter end!

The joint meeting of the Georgia Bankers' Association and the Country Bankers' Association of Georgia will be held in Macon the latter part of March. The convention, which is an annual affair, is called two months earlier this year in order to formulate action for meeting pressing problems that call for unified programs.

England Striving to Evolve System of Export Credits.

London, England, February 4—[Special.]—According to the American Chamber of Commerce in London, the British Government is formulating a scheme to facilitate trade with European countries by means of a credit insurance arrangement, and, in order to discuss their proposals, recently called a special conference of bankers, insurance companies and accepting houses, when it was decided that a committee representing the bankers and accepting houses should be formed.

Starting from the assumption that the insurance of credits is necessary and desirable in order to assist the development of trade, the committee will examine the details of a scheme for establishing such a system on a proper commercial basis. The scheme will be a joint one, in which the Government, the bankers and insurance companies will share in certain proportions the profits or losses, as the case may be.

Another scheme which is attracting favorable attention, says the American Chamber, is that of Sir Edward Mountain, a director of the Eagle, Star & British Dominions Insurance Co. It is claimed for this scheme that it could be put into operation almost immediately, and would quickly start trade going and would have a very beneficial effect on the exchanges.

This scheme proposes that a syndicate composed of all leading banks and insurance companies should be formed, and that the Government should allocate £13,000,000 out of the £26,000,000 already set aside for export credit, to be used as a fund with which to guarantee the members of the syndicate against ultimate loss, the syndicate to take any profit which might be made out of the insurance transactions and pay all expenses of carrying on. If the Government accepts the proposal, similar syndicates would be formed in countries such as Roumania, Serbia, Austria, etc., consisting of leading bankers who would give their guarantee for what it is worth to the British syndicate.

It is claimed, says the American Chamber, that the £26,000,000 allocated by the Government could be used to better advantage than at present, since the total advances actually made from the fund from September, 1919, to December, 1920, reached only £137,785, which seems to point to the fact that the Government scheme is being utilized to a remarkably small extent.

Big Appropriations for North Carolina State Institutions.

Raleigh, N. C., February 27—[Special.]—The Legislature of North Carolina, among the "big business" of the closing days of the session, made provision for the State institutions during the next two years totaling \$5,730,000 for buildings and improvements. The State University leads with \$990,000; then comes the State College for Women, at Greensboro, with \$585,000, of which \$35,000 is for teachers' homes; State College of Agriculture and Engineering, at Raleigh, \$550,000; State School for the Deaf, at Morganton, \$20,000; State School for the White Blind, at Raleigh, \$250,000, in addition to \$125,000 unexpended from previous appropriation; State Reform School for Girls, at Samarcand, \$165,000; Stonewall Jackson Reform School for Boys, at Concord, \$140,000; Caswell Training School for the Feeble-Minded, at Kinston, \$230,000; East Carolina Teachers' Training School, at Greenville, \$325,000; State normal schools for negroes at Elizabeth City, Fayetteville and Winston-Salem, a total of \$400,000; State Reformatory for Negro Boys, \$25,000. All these are educational institutions.

For the hospitals for the insane, for buildings and improvements, the appropriation for the same period are: Central Hospital, at Raleigh, \$765,000, to provide a building for 850 patients; Western Hospital, at Morganton, \$150,000; Negro Hospital, at Goldsboro, \$300,000; State Tuberculosis Sanitarium, at Montrose, \$430,000; Orthopedic Hospital, at Gastonia, \$100,000; for an Agricultural Department building at Raleigh, \$75,000, in addition to \$250,000 previously appropriated; for the Confederate Soldiers' Home, at Raleigh, \$35,000.

The C. L. C. Thomas Warehouse of Atlanta, Ga., is the first to be bonded and licensed under the United States Warehouse Act, according to John M. Bell, manager of the warehouse. It has a storage capacity of 8000 bales of cotton.

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A Review of Cotton Production and Prices

By F. W. GIST, Agricultural Statistician, Montgomery, Ala.

Perhaps as little is known concerning the real facts connected with the production of the fiber which clothes the world, particularly by those removed from the cotton fields, as about any item of human consumption. The erudite manager of a great cotton firm in New York once said to the writer that New York was the place to get all the facts about cotton. Probably it is true that most of the facts have some time or other found their way into that great center of commerce, but men have a way of shaping facts to their own purposes, as the artisan shapes raw material into the finished product, and by the time a full knowledge of the factors which influence the production of corn or wheat or hogs or cotton trickles into the banks, the exchanges, the distribution and export centers, and finally into the finishing factories, they have often become so overshadowed by commercial and financial interests that the primary conditions surrounding production have been entirely counted out of the problem.

Awhile ago a great newspaper, published in the second city of this country, carried the statement that during the World War period the Government purchased 52,000,000 bales of cotton in order to make the South prosperous. This was evidently the result of gross ignorance or vicious purpose. During the three years this country was actually in the war the South produced less than 40,000,000 bales, including linters, and the Government purchased directly only the linters, amounting to less than 3,000,000 bales in number and in value to less than the price of 1,000,000 bales of spinnable cotton.

In the readjustment of price levels now in progress cotton is occupying a prominent place. The cotton producer is, as naturally as those engaged in other lines, resisting the sharp downward tendency in the price of his product, his interest therein being the more acute because the serious break came after he had produced on the basis of former cost. The consumer is, just as naturally, clamoring for a reduction in the cost of clothing, and the manufacturer and dealer are quite as naturally endeavoring to protect themselves against loss as between the other two interests. A dispassionate and unbiased review of facts may serve to dissipate much of the harsh feelings on both sides of the controversy.

Much has been said in this connection about the law of supply and demand, the same having been freely invoked by both sides. In attempting to trace the relation of this law to prices, one is apt to hastily conclude that it is something of myth; but mature consideration usually finds a measure of correlation, more or less affected by other influences at various stages. As forming the basis of a study of this relation the following statement, showing the five-year average production of cotton (including linters, since linters began to be preserved for commercial purposes) and the five-year average price per pound is set out:

Five-year period.	Production, bales.	Price per pound.
1835-39	1,273,000	12.4
1840-44	1,722,000	7.6
1845-49	2,026,000	9.4
1850-54	2,708,000	10.8
1855-59	3,435,000	11.8
1860-64	2,135,000	59.3
1865-69	2,199,000	30.5
1870-74	3,697,000	17.5
1875-79	4,425,000	11.5
1880-84	5,495,000	11.0
1885-89	6,593,000	10.4
1890-94	8,324,000	7.5
1895-99	9,599,000	6.4
1900-04	10,899,000	9.3
1905-09	11,935,000	11.2
1910-14	14,871,000	11.0
1915-19	12,530,000	24.0

It is interesting to consider the trend of cotton prices during the two periods seriously affected by war conditions, which are not co-extensive with any of the above five-year levels. The two periods cover, respectively, the years 1861-63 and 1914-19. The records disclose the fact, however, that the serious effect of the Civil War on production and prices did not expend itself until the crop of 1870, amounting to over 4,000,000 bales, had brought production back to its previous high point in 1861 and the price to below 20 cents, thus extending over a period of practically 10 years. It remains to be seen whether the effect of the World War will be extended over an equivalent period.

In 1861 cotton production had reached the highest point in his-

tory, the aggregate crop that year being in round numbers 4,491,000 bales of 500 pounds gross weight. The crop of 1860 had been 3,841,000 and the average price per pound had been 13 cents. Exports had fallen from 3,535,000 bales in 1859 to 10,000 bales in 1861, and yet the price of cotton had jumped from 11 cents in 1859 to 31.3 cents in 1861. In 1914 the production of cotton had again reached the highest point in history, this time being equivalent to 16,992,000 bales of lint and linters. We had seen a five-year average production of 14,471,000 bales, a five-year average export of 9,219,000 bales, and a five-year average price of 12.4 cents. Contrary to its course in 1861, on the outbreak of the World War, in 1914, cotton dropped to 7.3 cents. In the one case the immediate result was an almost trebling of price, while in the other it was cut almost half in two. In 1862 the crop fell to little more than a third of the preceding one and the price went to 67.2 cents, and this in face of the fact that exports had become almost nil in their influence. In 1915 the crop fell off about one-fourth, exports about the same, and the price went upward only about 60 per cent. In 1863 and 1864 practically no cotton was produced, very little exported, and the price went to 101.5 and back to \$3.4. In 1865 and 1866 production recovered to about half the pre-war volume, exports recovered to nearly one-half, and the price fell to 43.2 and then to 31.6 cents. In the four years following 1914 cotton production was maintained at about an average of 12,500,000 bales, exports varied from 4,500,000 to 6,500,000, and the price advanced from 11.2 cents in 1915 to 28.8 cents in 1918. In 1919, which rightly compared with 1867 in relation to post-war conditions, production was little more than 12,000,000 bales, exports were 6,500,000, and the price went to an average of 35.7 cents per pound. In contrast, in 1867 production had recovered to 2,346,000 bales, exports to 1,503,000, and the average price had dropped to 24.9 cents. In 1868 both the crop and exports fell off slightly, and the price went to an average of 29 cents; in 1920 production was increased over the preceding year by close to a million bales, exports fell rather sharply to the present writing, and the price has fallen to 13.5 cents, or virtually back to the pre-war standing in 1913.

The main points of comparison, then, between the Civil War and World War periods in the matter of cotton prices are (1) during the former actual war operations the production of cotton was almost completely discontinued, while in the latter it was only partially decreased; (2) during the former exports were entirely discontinued for practical purposes, while in the latter they were only relatively decreased as compared with production; (3) during the former the price of cotton reached its highest point in the midst of war activities, while in the latter the high point was not reached until more than a year after the hostilities had ceased; (4) for four seasons after the Civil War the price of cotton remained higher than the prevailing price two years after the close of the World War; (5) in the first year of the Civil War cotton production reached its historic peak and the price its highest level since 1817, while in the first year of the World War production again reached its peak and the price broke to its lowest point since 1896; (6) it was 10 years after the outbreak of the Civil War until production and price found their pre-war level, while now only six years from the inception of World War influences production has not reached the five-year average of 1910-14, but the price is back to the 1913 average.

One does not attempt to find the economic reason after all these years for the high price of cotton in 1861 to 1863; perhaps it was the ordinary inflation attendant upon war activities; maybe it was something else. The low price of 1914 must be accepted as the logical result of overproduction compared with demand, the shadow of the war clouds which were yet only in our horizon, and perhaps in some measure to the evil influence of speculation. The present price, amounting to only one-third of the peak of a year ago, is being charged to various influences. One says it is the withdrawal of credits by the Federal Reserve Board; another, that it is the lack of purchasing power in Europe; another, that it is the bear speculator; another, that it is the abundance of caution on the part of manufacturer and dealer. Doubtless all these are contributory to or resultant from the main cause. A dispassionate

view of present conditions compels the conclusion that the main cause is the insistent demand for lower prices on the part of the consumer, coupled with the existence of more cotton than the world can quickly buy in its present circumstances.

The chief concern of the cotton grower is that deflation, whatever its cause, struck him first and hardest of all those it has affected. Let us first remember that the cotton crop of 1914 was sold at 40 per cent unit price more than that of 1913, and that its aggregate value was approximately \$200,000,000 less than the preceding crop, which was two millions less in volume. The unit price of other items of farm production in 1914, as compared with 1913, was as follows: Corn, 95 per cent; wheat, 123 per cent; oats, 112 per cent; barley, 101 per cent; rye, 138 per cent; buckwheat, 101 per cent; rice, 108 per cent; potatoes, 71 per cent; sweet potatoes, 100 per cent; hay, 89 per cent; tobacco, 77 per cent; cattle, 119 per cent; sheep, 102 per cent; hogs, 103 per cent. No growers of farm products, therefore, suffered in that year as did the cotton grower, and most of the others received an advance in price.

At the highest price reached in the general advance since the crop of 1913 eight principal farm commodities average 206 per cent above their price in October, 1913, and on October 1 last stood an average of 80 per cent above the price of six years ago. Cotton at its highest point was 180 per cent over the price in October, 1913, stood on October 1 last at 90 per cent above, and is now about the same price as in the pre-war year. Hence, after losing 40 per cent of its unit value in 1914, which no other commodity experienced, it did not quite reach the average of other price advances and has fallen now much below the general level of recession.

Without giving consideration to the somewhat extravagant claims of those who feel that all the cost of farming in the South should be charged to cotton, which naturally the consumer will not agree to pay, the Alabama Department of Agriculture has made a determination of the cost of producing the recent crop, **charging cotton with only what it has really consumed in labor, material and interest on investment, and reports that on the basis of the officially estimated yield the crop in that State has cost about 34 cents per pound.** Perhaps some other States have produced this crop cheaper, with higher yields; perhaps in some it has cost more, with higher wage rates; but on the whole, Alabama may be taken as the center, both geographically and with regard to cost elements, and, according to her own investigations, the cotton farmer cannot be placed in the category of profiteers when he claims more than the present price as the cost and reasonable profit of his product.

Just here is the crux of the whole situation from the standpoint of the cotton grower. He is faced with the selling of his goods at less than they cost him; he does not see others doing the same in like proportion; naturally, he objects to being forced to do so. He sees the railroads granted higher rates, that they may recoup some of their losses and arrange for efficient conduct of their business in the future, and this is only one of the many instances coming under his observation in which credit facilities and governmental agencies are being used to prevent loss and inefficient production in the near future. He sees no probability of labor, which constitutes at least 45 per cent of the cost of his production, being much cheaper another year; fertilizers have no tendency toward reduction in price; the commodities he has to buy, while some cheaper, and with a tendency toward yet lower values, give no evidence of being produced now or in the future at a loss, and most of them are yet relatively higher than cotton; he knows that his only protection is to withhold his goods from an unprotected market. There was a time when he owed all his cotton before it was picked; he still owes a goodly part of it, and wants to pay his debts. If he must sell that portion necessary for this purpose he will further break his own market. Some of this load can and is being carried by local banks, but not all of it can be. Since the financial strength of the country is in the hands of the Government, where it should always have been for the protection of each and every interest, he must naturally look to the Government for his financial relief. There is no disposition on the part of the reasonable farmer, and most of them are reasonable, to ask the Government for anything except what he is entitled to and which the exigencies of the situation demand; all he wants is such an administration of the financial strength as will enable him to market his product in an orderly manner.

Just at the moment of writing it is merely a question as to whether a crop which has cost, in the belief of the farmer, \$2,000,000,000 in labor and other expenses shall be sold for a loss of one and a third billions. Such a loss will seriously affect the whole country as well as the grower of cotton.

England's Control of World Markets May Not Be Regained.

Chicago, February 16—[Special.]—The dominant position formerly enjoyed by England in the world markets may never be regained, in the opinion of Trade Commissioner Leonard B. Gary of the Department of Commerce, while in Chicago on a brief visit.

His investigation of the textile industry of England covered a period of 18 months, and additional surveys of other industries were also made. He is now visiting various cities of the United States for the purpose of acquainting American manufacturers and exporters with the results of his work.

"The absolute and complete unionization of industry in England almost precludes the possibility of Great Britain competing with American goods, even though the wage scales at the present time are practically the same in both countries in many industries and the greater production methods of this country give us an advantage that it will be difficult to overcome," he said. He had been asked for his reason for this opinion. "You must consider that the present union scale of most of the textile workmen ranges from 215 per cent to 245 per cent more than 1914 wage schedule, and that in the face of that the working hours have been cut from 54 to 48 per week.

"The present scale agreement runs to May of this year, and although there are thousands of men out of work, they refuse to consider any cut in wages. They figure that their unemployment insurance will carry them through, and that they will be able to force the employers to continue the scale.

"The coal situation is another factor that militates against hope of a radical reduction in prices in England. Although there are 200,000 more men employed in the coal industry than in 1914, there is less coal produced than in that year, and the price has increased fivefold.

"The markets are glutted with unsold goods that were manufactured for export, but the normal markets, the colonies, have refused to buy at the prevailing prices and have been waiting for the expected drop. In the meantime, the various colonies, while buying some goods from the mother country, have continued trading in the United States for the immediate needs of their people.

"Up to November the cost of living had not stopped rising in England, and the slight break that has taken place since then has not been reflected in production costs of goods that constitute the bulk of exports, and until this takes place, it will be impossible for England to figure as a serious factor in the international markets.

"The tangle over the Australian wool situation has not improved conditions in the wool industry, which is almost as badly demoralized as the cotton-goods trade.

"The 1919 Australian wool crop is yet unsold, and the 1920 crop is on the market with a bad effect on the growers. The 1919 crop has been thrown back on the wool syndicate organized by the Australians to protect themselves. This, together with portions of the 1920 crop, will be sold independent of the London auction. However, the resultant feeling that the situation produced has not tended to improve trade relations between Australia and England already slightly strained.

"The Briton continues to feel confident that he can easily regain his lost prestige with the readjustment of conditions, and that his position in the international markets will be unassailable, but the present trend of events, and continued refusal of colonists and dependencies to buy, leaves a large element of doubt as to the soundness of his conclusions."

The Southwest Water-Works Association will hold its convention this year on May 9, 10, 11 and 12 at Oklahoma City, Okla. Headquarters will be at the Skirvin Hotel. Papers will be read from the State boards of health of the different States, and a large attendance is expected.

SAN ANTONIO'S FIRST COTTON MILL NOW OPERATING.



GENERAL VIEW OF SAN ANTONIO COTTON MILLS. FIRST TEXTILE PLANT ERECTED IN SAN ANTONIO, TEXAS.

Herewith are presented a number of views of the plant of the San Antonio Cotton Mills recently placed in operation and described in full in these columns a few weeks ago. The plant is operated by electricity and is entirely fireproof, having, in addition to a sprinkler system, chemical extinguishers, fire hydrants and hose connections throughout.

houses each contain 10 apartments, which open upon concrete porches front and back. Every apartment has two large convenient rooms, with steam heat, running water and lighted by electricity. Plenty of light and ventilation is provided. Each opens upon a court containing bathhouses with all modern conveniences.

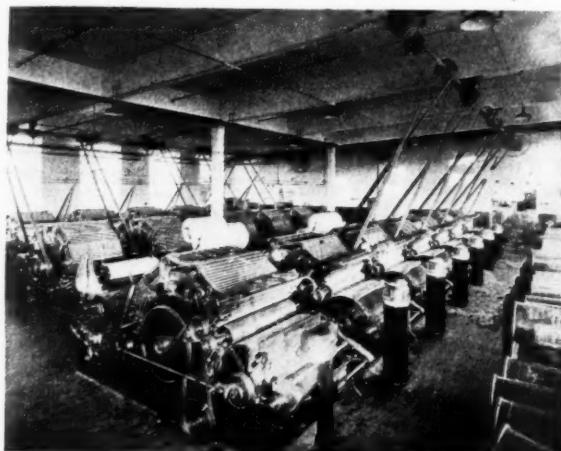
The plant buildings have been constructed with a view to future



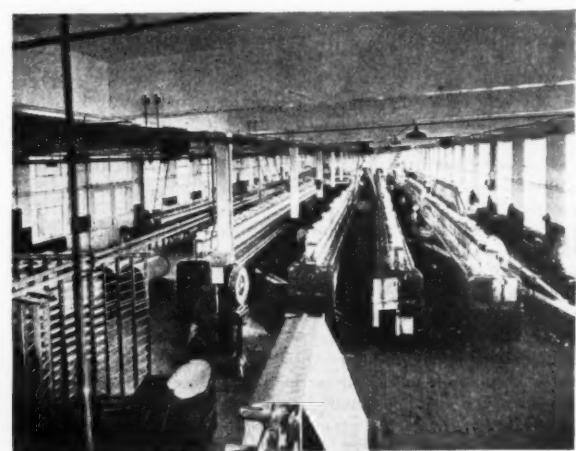
COTTAGES FOR FOREMEN AND EMPLOYEES OF SAN ANTONIO COTTON MILLS.

In order that future development and operation of the plant may not be retarded by inefficient and ill-housed employees, there have been constructed dormitories and dwellings for the workers. There are two classes of houses, attractive red brick and concrete bungalows with all modern improvements, including steam heat, and concrete apartment-houses. The separate houses rent for \$25 a month and the apartments for \$10 each. The apartment-

expansion. Globe sprinklers are used throughout, the entire fire protection of the plant being installed by the Globe Automatic Sprinkler Co., Dallas, Tex. The water supply is independent of the city. The sprinkler supply comes from a 75,000-gallon steel gravity tank on a steel tower 100 feet high, built by the Chicago Bridge & Iron Co. Special machinery has been installed, including vertical openers, willows and Gordon-Hay cleaning machines.



INTERIOR VIEW SHOWING CARD MACHINES.



VIEW SHOWING SPINDLES AND OTHER EQUIPMENT.



CONCRETE DORMITORIES ERECTED, WITH EVERY MODERN CONVENIENCE FOR EMPLOYEES, ESPECIALLY MEXICAN LABORERS, AT SAN ANTONIO COTTON MILLS.

There are 2500 spindles. The weaving equipment consists of a 60-inch Model "P" Draper loom. The pickers, cards and spinning machinery were supplied by the Saco-Lowell Shops, Lowell,

Mass. The plant is electrically operated, the power being furnished by the San Antonio Public Service Co. The McKenzie Construction Co. of San Antonio was the general contractor.

How Our Government Failed to "Tote Fair" in Its Treatment of the Farmers

GOVERNMENT BONDS NO LONGER HONORED.

By LIDA B. ROBERTSON, Livingston, Ala.

In a former article I set forth some perfectly sane reasons as to the increase in cost of living, due to logical facts. Now, here are some further facts as to the status of the farmers and our Government. Negroes have an axiom, "toting fair," which they apply to a hand-carried load in which another does or does not bear an equal share of the load, and I know of no better caption than it as applicable to the Government's blow upon the farmers. I am a teacher and do not own a foot of farm land, but it makes my heart bleed to see the sun-up-to-sun-down workers in the fields who produce the food and raiment for the nations crushed down under the cogs of unmet debts and of obligations through the Government's incomprehensible bayonetting of the heart and the pockets of the very ones upon whom all life depends to furnish supplies below the cost of production.

First of all, the call to arms wrested from the fields stalwart workers, both white and black, into the hundreds and thousands, leaving the double burden upon the older men and boys to feed the army and the world, as implored by our Government. Next, the four Government bond drives combed from the farmers and merchants all cash, some even borrowing the money from the banks in loyalty to buy them. I invested all of my cash in thrift-stamp bonds—in loyalty—despite the fact that my home had been set on fire by a neighbor's burning house and both burned to the ground and I was homeless. Later, the last note unpaid in the bank on the new church, of which I was a member, fell due, and I gave a thrift-stamp bond as my portion to liquidate it, but the bank rejected it and returned it, stating that it could not be accepted, that I must pay the cash, so I borrowed the cash. Next, a religious drive came, and I gave that same bond, as they said they would accept such, and they, too, returned it, demanding the cash instead, and thus my loyalty received a severe jolt. The Government had my cash, and in return I had an unnegotiable drug on the market. However, I set my jolt aside and assisted in the Victory Loan drive, and three of us women raised in one cotton-farm community \$15,000 in cash. Now, in that same community the farmer-soldier boys have returned, taken up their life again, produced crops, to be met with Federal deflation to maul down the costs of farm products and leave all other commerce untouched, and their parents' cash headed into the Federal Treasury so they cannot handle the crop slump and conditions. It is now into the new year, and fields still white with unpicked long-staple cotton, ruined for the lack of labor which has been lured by the very Government itself out of the fields for

high wages which it pays and a farmer cannot, and has suggested by newspaper reports hundreds of thousands of "unemployed," deserting the farm fields for less hours and inflated wages in other commercial pursuits. Last May I traveled 150 miles along fields growing up in briars, untilled, and counted only 14 laborers in the fields, and those were white. Is there any difficulty in reading the supply diminishing and the consumption increasing?

Cotton is the great staple for foreign commerce, and, wholly unlike wheat and corn, is an all-year-round occupier of the soil. No second crop can be raised, as in wheat, where hay and clover come up after harvest. Wheat is planted and needs no further work until harvest time. Cotton has to be planted in raised rows to prevent seed-rotting, then has to be chopped thinner, and a vigilant cultivation from then on to destroy grass and weeds from sapping the growth from the plants. Then comes the hand-picking, weighing, ginning, baling, bagging and ties, etc., making it wholly a different proportion in cost of labor and occupancy of the soil from wheat, as one man can take care of 100 acres of wheat with machinery, while 20 acres to a cotton crop is a stiff job, and on top of this the boll-weevil makes it a risky uncertainty.

A nation's bulwark of safety is in holding the confidence of its masses by "toting fair," while nothing more surely breeds ruin than trampled-upon or shaken "loyalty" unhesitatingly and sacrificially bestowed upon one's native heath. Constructive basic principles of "toting fair" to sow and maintain patriotism and loyalty is one thing, and that of saluting the flag and taking hats off at the national anthem and boosting hurrahs as Americanism wholly another. The latter is a veneer, and not what can or does ever maintain the stable and enduring force of a republic, which must be and is built upon fidelity of the people toward the Government and the Government toward the people.

One man alone had \$70,000 in cash last year, and this year cannot meet his debts; and men last year who pledged installment payments on their income tax have no income this year, and are borrowing money to pay the income tax installments. And how can factories sell their products and keep the financial ball making a "home run" when farmers cannot pay their debts of production, and cannot buy factory outputs, and incomes defunct? "Toting fair" never yet lost a patriot nor a patriot's willingness to meet a nation's need, while unfairness tends to force its masses into disloyalty.

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FARM LOAN ACT UPHELD.

Supreme Court's Decision Proves a Message of Hope to the Farmers of the South and of the Country.

Washington, February 28—[Special.]—Announcement of the upholding by the Supreme Court of the United States of the constitutionality of the Farm Loan Act will have a tremendously stimulating and stabilizing effect upon the farmers of the South, a number of whom have approved applications for loans with the Farm Loan banks of that section.

While it is known that there is comparatively little money in the treasury of the Farm Loan Bureau at this time, something like \$3,000,000, it is estimated, Commissioner Lobdell of the Board announces that a new issue of Farm Loan bonds bearing interest at 5 per cent will be issued immediately, the amount yet to be determined, and the money thus raised will probably be available for distribution among those whose loans already have been approved shortly after the 30-day period set by Commissioner Lobdell as necessary for the floating of the issue.

Officials of the Farm Loan Bureau anticipate a rush of business, now that the embargo placed upon the business by litigation has been lifted by the Supreme Court's decision. The farmers as a whole are in greater need than ever of the services of the institution because of the drop in prices of farm products. Many of them, it is declared, have been forced to sell their livestock and other products at less than the cost of production, and unless they can get money upon favorable terms, many of them would be driven out of business.

Delta Company Has Contracts for 100,000 Bales of Cotton With Central Europe.

Memphis, Tenn., February 28—[Special.]—The Mississippi Delta Cotton Export & Trading Co. has on hand contracts for the shipment of more than 100,000 bales of cotton, which is to be shipped to the mills of Central Europe, there to be manufactured. The European mills will retain a portion of the raw material to cover the cost of manufacture, and the Delta company, through its agents, will dispose of the manufactured foods in foreign markets.

Fifteen thousand bales of this cotton already have gone forward, it is stated. These shipments largely are made up of low-grade cotton from last season's crop, which cotton is not regarded as suitable for manufacture by American spindles, but which finds a ready market in the mills of Central Europe.

Limestone, Phosphate and Fertilizer Development.

Batesville, Ark., February 21—[Special.]—The Planters' Lime, Phosphate & Fertilizer Co., a \$1,500,000 concern, has lately been organized to develop certain stone resources in Independence and Izard Counties in the vicinity of Penters Bluff, on the White River Railroad. The officers of the company are well-known bankers, planters and professional men of this section of Arkansas.

The principal products will be burned, ground limestone, hydrated lime and commercial fertilizer. The company owns 300 acres in a section that is well adapted to the undertaking. In a recent survey made of the property, based on prospecting, it was shown that they have 19,602,000 tons of phosphate rock and 2243,211,249 tons of high-grade limestone for the manufacture of lime. The property also contains deposits of manganese, but the extent of this has never been determined. It is associated more or less with the phosphate deposits and will be mined only when they come in contact with it in their quarries. Two big quarries will be opened as soon as the plants for handling phosphate and limestone can be constructed. Later a fertilizer plant will be constructed at Little Rock, where the finished product will be manufactured. The officers of the company are: J. R. Alexander of Scotts, Ark., president; C. G. Henry, Newport, Ark., vice-president; R. R. Ramey, Kensett, Ark., treasurer and general manager, and J. W. Williamson, Batesville, Ark., secretary.

The phosphate lies in stratified ledges from 2 to 15 feet thick and carries from 30 to 65 per cent bone phosphate. The limestone

on the property is of two kinds: the St. Clair, which lays in ledges up to 210 feet thick, and the Izard, which is 235 feet thick in many places. The former is particularly adapted to the manufacture of lime, and the latter to the manufacture of ground limestone.

The concern expects to furnish the delta country with fertilizer and limestone by water transportation. The local plants will be located on the banks of the White River, which is navigable for light draft boats from Penters Bluff to the Mississippi River. All towns along the Mississippi will be distributing centers for the product of the concern.

Diversified Products the Farmers' Salvation.

W. W. MORRISON, Galveston, Tex.

The indications are that it will be quite a while before the world will pay even what it cost to grow cotton. The existing supply and the crippled state of world consumption warrant this statement. It would be recklessness to ignore such a possibility in any calculations.

It is just as evident also that every bale of cotton grown during the year will defer just that much longer the time when cotton will bring what it cost to produce it. It is clear that during this period of waiting the farmer must depend for his living almost entirely on some other product than cotton.

It is claimed that livestock, grain and other diversified products cannot be sold at a profit for some time to come. The chances are decidedly in favor of their being sold during the next few years at a better advantage than cotton can be. In any event, the farmers can live on these diversified products, and live better than any other class of our citizens, none excepted. This has been demonstrated time and again.

The fact is that no class of business men can live so well and be so entirely independent as the farmers can while waiting, as most everybody must do, for the world to right itself. It stands out equally as evident that the conditions of no other class of our citizens will be quite so deplorable as that of the farmers if they depend on cotton for their living, rather than on other products, during the time that must pass before consumption and the price of cotton is restored to a basis that will justify its production.

A heavy shrinkage indicated in the supply at the beginning of the new cotton year is the only development likely that could change this general trend.

Auto Fatalities Proportionately Decrease.

A steady decline in the ratio of fatal accidents to the number of cars in operation in the United States is shown by the official figures of the National Automobile Chamber of Commerce.

Automobile deaths proportionate to the number of cars in 1914 were .0025, and in 1919 had been reduced to .0013. In Detroit in 1920 there was one less fatality than in 1919, and in New York there were 21 less than in 1919.

Despite the decrease of 50 per cent in fatalities within five years, it is the belief of the automobile manufacturers that the actual numerical increase shown calls for a further strenuous effort to minimize the hazards. More playgrounds (43 per cent of all of the automobile fatalities occur to children under 15 years of age, and the children must have a place to play) uniform traffic rules and regulations against overloading are among the measures which the National Automobile Chamber of Commerce announces that it will press during the coming year.

Figures showing the relation of car fatalities to various factors related to accident indicate a decline of 50 per cent in the ratio of fatalities per car as follows:

Year.	No. auto deaths per car.	Total No. auto deaths.	Registration of cars.	No. of cars per 1000 pop.	Auto death per 1000 population.
1914	.0025	4231	1,711,339	17	.0428
1915	.0024	5928	2,446,664	24	.0591
1916	.0021	7397	3,512,996	34	.0725
1917	.0019	9184	4,983,340	48	.0887
1918	.0016	9672	6,146,617	59	.0919
1919	.0013	9827	7,558,848	71	.0936

*Estimated of entire United States by National Workmen's Compensation Service Bureau applying Census Bureau figures for registration area to grand total.

THE IRON AND STEEL SITUATION

Strong Pressure to Get Costs Down—Reduced Freight Rates Now Believed to Be Essential.

Pittsburgh, Pa., February 28—[Special.]—The iron and steel industry is taking a very philosophic view of affairs, as it always does. There is no complaint or effort to throw the blame on somebody for the furnaces and mills not being in full operation. There is a strong feeling that pig-iron and steel will have to be sold as cheaply as possible, hence everyone is trying to get costs down. The day for telling the customer he must pay a high price because costs are high is past. The producer wants to be able to tell the customer his costs are down, so as to encourage the consumer to buy. Even in the matter of freight rates, the one item in cost which a few weeks ago was considered unassailable, there is now talk that eventually freight rates can be gotten down. It is remarkable how quickly the talk in Pittsburgh trade circles has changed. Only very recently the common talk was that the railroads should have higher freight rates so that they could increase their facilities. Now the talk is that they must have lower freight rates so as to get enough business to employ the facilities they have already, and everyone agrees that the way to the new condition is through the railroad payroll being reduced to proper proportions, to something like the condition that obtained before the Government so greatly increased the number of jobs.

Competition.

Competition, and sharp competition, is coming back to the iron and steel industry. There will be hard work, and profits for some. Men's minds are going back to the great industrial depression of 1893-98, recalling that in the early part of that depression everyone, practically, was in a bad way, but afterwards, when costs were reduced, there were some very fair profits made. There was demand for steel, though not a demand in excess of the capacity, such as in recent years has been considered necessary in order to make the business profitable. Just now, of course, there is practically no demand at all for steel, but that is purely a temporary condition. Demand is likely to increase in a very few weeks, and by May 1 demand will probably be several hundred times as great as at present, though it may represent only half the present productive capacity, which is 50 per cent greater than at the middle of 1915.

Prices.

Decline in the market for the various finished steel products hinge on demand. When there is no demand at all, prices are stationary. The mills cannot create demand by successively reducing their asking prices, but must find a possible buyer who has some requirements. Usually the buyer has no set price; he is willing to pay or can afford to pay. Rather, he simply wants to buy at a dollar or two a ton lower than the lowest price he has previously heard. On account of the extreme lightness of demand, declines in the past week have been small, and some commodities have not declined at all. The only quotable declines are in shapes, plates and black and galvanized sheets. Plates have been quoted rather freely at 2.10 cents, against 2.25 cents a week ago. Shapes have been quoted at 2.15 cents, against 2.20 cents, but no sales are reported. One or two structural jobs are in the market, but the prospective buyers are simply taking and filing the successive bids made. Black sheets can be done at 4.10 cents, against 4.15 cents a week ago, and galvanized at 5.25 cents, against 5.35 cents. All these prices could be shaded further on an order of sufficient size, say 2500 to 5000 tons in plates or 1000 to 2000 tons in sheets. Bars remain quotable at 2 cents, but it is known that 1.95 cents and 1.90 cents would be quoted on sufficiently attractive inquiries, and in some quarters it is believed one mill is ready to do 1.85 cents whenever it sees a large enough order.

At the prices just quoted the declines from the Industrial Board prices are as follows: Bars, \$7 a ton; shapes, \$6; plates, \$11; black sheets, \$5; galvanized sheets, \$9.

In connection with market prices now there is little talk about

costs. The prices now ruling are a little above the costs in September of last year. The basis of costs has gone down somewhat but, on the other hand, the present light operation of independents swells the cost enormously. Mills do not seem to be thinking of their present costs, but rather of their prospective costs, as they expect to keep paring costs week by week.

The Steel Corporation.

The Controller of the Currency has written a letter to Judge Gary, chairman of the Steel Corporation, urging that the Corporation reduce its prices. Various business men, not in the steel trade, are saying that the Corporation ought to reduce its prices in order to encourage the country's readjustment. The independents seem to want the Corporation to reduce prices, but what they really want is for the Corporation to reduce its wage rates, and they realize the Corporation would not reduce wages until it had first reduced prices. The customers of the Corporation do not seem to be at all anxious for the Corporation to reduce prices, and some of them would probably prefer that no change be made for a while. Many, if not most, of the customers have been taking steel at rates greater than their rates of consumption & distribution, so that they have stocks on hand.

Thus far the Corporation has shown no inclination to reduce prices, and therefore no disposition to reduce wages. The Corporation's position is only a temporary one. The Corporation could not logically reduce prices when it had a high operating rate, but its operating rate is going down very fast, largely by reason of the independent price-cutting. In the first fortnight of January the rate, measured by steel ingot production in proportion to rated capacity, was about 92 per cent. Week before last it was about 75 per cent, and last week it was about 65 per cent. This week and next will in all probability see further and perhaps rather sharp declines.

The Corporation will reduce both prices and wages, the only question being as to the time and the amount. As to time, whether the reductions will be made as soon as an operating rate of 50 or 40 per cent is reached or becomes in immediate prospect, or will be made some weeks or months afterwards. As to amount, whether the Corporation, when it does act, will go beyond the independents with their price and wage reductions, or will try to hit the same level as the independents. If the Corporation did the latter, the independents, in their present mood, would probably start at once to go a trifle lower.

Pig-Iron and Coke.

Foundry pig-iron has quietly receded another dollar a ton, being now quotable at \$27, valley, with Bessemer remaining at \$27 and basic at \$25. These prices are largely nominal, and would probably be shaded in case a fair-sized order was in sight. Furnaces hope to make further reductions in cost. Ore will be much lower for the 1921 season, but the ore interests are making no move toward developing a price. As to coke, the Connellsburg market is quotable at \$4.50 for spot furnace and \$5 for contract furnace, but there is little interest in present prices, it being recognized that when the Steel Corporation makes its general wage reduction there will be a lower scale for the Connellsburg region and the production cost will be less. The independents are indisposed to take the initiative in reducing wages.

Iron Stocks Accumulating at Birmingham.

Birmingham, Ala., February 28—[Special.]—The pig-iron trade in the Birmingham district continues slow, though there have been a few 1000-ton sales made, besides numerous car lots and many 100-ton orders placed lately. The aggregate, with all these numerous sales, is far from being satisfactory or sufficient, even with a minimized production, to prevent iron still going to the accumulated stocks, the figures which, when inventory is taken again, will show more than 165,000 tons on hand.

But five furnaces are on foundry iron in this district, and still there is a surplus. The most interesting thing right now is that

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many of the consumers buying iron from hand-to-mouth fashion are asking for immediate delivery, and this request is being carried out as quickly as possible. The quotations are not firm. The low quotation of \$27.50, announced two weeks ago, promises to be high before long; in fact, there has been a sale at \$26.50. No. 2 foundry, 1.75 to 2.25 per cent silicon. A small tonnage of iron sold in this district down to \$25 per ton, but inquiry revealed the fact that the iron was off grade. There will be no improvement in the furnace output in this section until a considerable proportion of the accumulated iron has been worked off. The home consumption promises more as a better feeling comes up with the cast-iron pipe-makers, who announce there have been a few specifications lately and other business is in sight. Quite a little tonnage of cast-iron pipe has been started via Mobile, and ships to the Far West, through California ports and other movements, are being contracted for as regular sailings of boats out of Mobile are being arranged and a slight reduction given in the freight rates. There is no intimation of further reduction in cast-iron pipe prices, the \$55, \$60 and \$70 prices for Class B pipe to be maintained, for a while at least.

The Gulf States Steel Co. is operating at present its blast furnace and the nail and wire mills. The open-hearth furnaces are shut down, there being enough steel on hand to last the finishing departments for some time. The Tennessee Coal, Iron & Railroad Co. is still moving out its product, though new business is said to be a little slow. There is considerable rail moving from here. The steel fabricating plants of the Birmingham district are looking forward to better conditions.

The coke market in the Birmingham district is still dull, without incident. Settlement of the coal mine workers' strike during the past week, both the union leaders and the coal operators agreeing to submit the entire situation to Governor T. E. Kilby for settlement, brought about general good feeling in the industrial section of Alabama.

The coal market is dull in the Birmingham district, very little demand being received for steam and bunker coal. Some of the larger mines are running four days a week, and a number of the smaller mines being shut down entirely.

The scrap iron and steel market in the Birmingham district is still very dull. The quotations for scrap still show weakness, but it is hardly probable there will be any further reductions.

Pig-iron and iron and steel scrap quotations in the Birmingham district are as follows:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$26.50 to \$27.50; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$27.75 to \$28.75; iron of 2.75 to 3.25 per cent silicon, \$29 to \$30; iron of 3.25 to 3.75 per cent silicon, \$30.25 to \$31.25; iron of 3.75 to 4.25 per cent silicon, \$31.50 to \$32.50; charcoal iron, \$45.

OLD MATERIAL.

Old steel axles.....	\$20.00 to \$21.00
Old iron axles.....	30.00 to 32.00
Old steel rails.....	15.00 to 16.00
Heavy melting steel.....	15.00 to 16.00
No. 1 R. R. wrought.....	15.00 to 16.00
No. 1 cast.....	15.00 to 16.00
Stove plate.....	19.50 to 20.50
Old car wheels.....	17.50 to 18.00
Old tramcar wheels.....	21.00 to 21.50
Machine-shop turnings.....	50.00 to 51.00
Cast iron borings.....	8.00 to 9.00
	8.00 to 9.00

New Mexican Oil Wells.

Tampico, Mexico, February 24—[Special.]—An important late addition to the producing wells of the Panuco district is that of the Norman Mexican Petroleum Co., which came in with a flow of 30,000 barrels a day. The pay sand was encountered at a depth of 2280 feet. The Norman Mexican Petroleum Co. is a comparatively newcomer to the Mexican oil industry. It started oil operations here last August, and is reported to have spent a large amount of money in preliminary preparations.

The New England Fuel Oil Co. has just brought in a well at Amatlan with an estimated flow of 25,000 barrels a day. This company is in position to greatly increase its water shipments, and it is expected that during the next few months it will make a notable record in this respect.

The Corona Oil Co. has brought in a well of 1000 barrels daily flow in the Potrero Isleta section of the Panuco district. But for the fact that it was feared that salt water might be encoun-

tered the well would have been drilled deeper, with the possibility, it is stated, of a larger flow being thus obtained. The present flow was had at a depth of 2450 feet.

With the completion of the well of the Transcontinental Petroleum Co. at Tampico Arteaga, the flow has been increased to 5000 barrels a day. The company's other well in that field is making 3000 barrels a day.

With the bringing in of two enormous gassers upon the Totoca hacienda, expert oil operators regard the conditions as highly favorable for the discovery of another oil field of big production there. One of these wells is that of the International Petroleum Co., and it has an estimated flow of 175,000,000 cubic feet of gas a day. The other well is that of the Mexican Gulf Oil Co., and its flow is somewhat smaller than the former well. The gas came forth in such uncontrollable volume in the well of the International Petroleum Co. that it blew all the tools out of the hole and sent them such a distance away that they have not yet been found. This tremendous gas pressure is regarded as almost an assurance that there is big oil to follow. There promises to be much activity in drilling wells in the new territory on the part of the companies that have leases there.

Many Subjects Discussed.

By WALTER JOHNSON, Dallas, Tex.

The people of this nation should liberally patronize the advertising department of the MANUFACTURERS RECORD. The contest that has been made against treason by the MANUFACTURERS RECORD in the last five years places your publication at the very top of the list of American publications. Many persons may overlook the importance of patronizing the advertising department of the MANUFACTURERS RECORD, and their attention should be called to the importance of it. Let the good fight go on!

Lurking in the background of American institutions is a subtle foe to mankind that should not be forgotten. This money panic and stringency which has been brought on has not assisted in the maintenance of credit, and neither has it assisted the business interests of Americans, nor helped it to stabilize world affairs. It has a far different importance. The subtle foe to America and the Western civilization is the associated liquor interests and the international bankers, who are citizens of no country except for position and prestige. Those associated interests have a common motive in view. In the event the money stringency is to be maintained in the United States, the Harding Administration must lose in popularity, and the natural outcome will give rise to a new political party composed of the radical labor elements, and in the acquiescence of the common people, the Republican party will fall and the new organization will be under the control of the liquor interests. Any person with any sort of a vision should see the policy that is being fostered at the present time by the international bankers and the liquor interests. What they lost at Chateau-Thierry and on the memorable battlefields of Europe they expect to win by a deplorable financial stringency to be fastened upon the entire world. Prohibitionists should see the handwriting on the wall and take the proper steps to restore to normal conditions the reserve credit to the business interests of the nation. Republican leaders should see the importance of the situation. It is time that we begin to think as citizens of the greatest of all nations and deport every spy and Bolshevik, and eliminate from the mails the anarchistic propaganda which is now flooding the country. We cannot go back to the prices which prevailed before the war. The bonded debt was made on a 50-cent dollar, and it should be paid in the same coin. It is the liquor interests which are at the bottom of the trouble. They want to ruin the only nation that stands for prohibition, and to do that they have sought to destroy our civilization by the injection of the autocratic sentiment of pro-Germanism into world affairs. The Sinn Fein movement is a fair sample of the work of the liquor interests and the international bankers. The ardency by which the colonies supported England in the recent war is a testimony of the greatness and the fairness of the British power. Had the British been as tyrannical as some would have us believe, every one of those colonies would have deserted in the hour of emergency. Some time we will understand that the liquor interests were the instigators of the recent war. The plan is now to foster a new political party. We had better wake up and meet them.

GOOD ROADS AND STREETS

Daniel Willard, B. & O. President, Does Not Believe Present Railroad Rates Prohibit Road Building—If Any Inequalities Exist They Should Be Removed.

At the recent Good Roads Congress in Chicago a preamble and resolutions were adopted looking to obtaining a large reduction of the freight rates on road materials. It was recited that throughout the country consideration is being given to the improvement of roads, streets and other highways, but that many plans of this character are being abandoned or postponed without date because present costs are considered prohibitive, and that one of the large elements of cost is the freight. It was further stated that the advances made in the rates on this class of freight have been "greatly in excess of the percentage advance imposed on other classes of freight, and the rates so advanced were in August, 1920, again advanced 35 to 40 per cent"; also, that "the existing freight rates prohibit any road construction."

In view, then, of the fact that there is at present urgent need for providing employment to thousands of idle men, so the preamble went on to say, the following resolution was adopted:

"We request and urge the Interstate Commerce Commission, the Central Freight Association, Western Trunk Line Committee and other similar associations and committees of the carriers to immediately reduce the rates 25 per cent on sand, gravel, crushed stone, brick, cement and asphalt, when consigned to officials of the United States, any of the States, counties, municipalities, or to contractors for use in the construction or paving of public roads, streets or other public highways."

It was further decided to send copies of the resolution to the several organizations mentioned in it.

When the attention of President Daniel Willard of the Baltimore & Ohio Railroad Co. was called to this action of the Good Roads Congress the other day, he pointed at once to the statement made therein that "existing freight rates prohibit any road construction."

"Is that true?" he queried. "People often make extravagant statements. They can still build roads; the only thing is that they will cost more. The railroads have to live, and if rates are reduced upon one kind of freight, folks interested in other kinds will demand that their cost of transportation shall also be made lower. The lines are not earning their interest now. Would you do away with the railroads? Of course that could not be."

"Now, are the freight rates on road materials out of adjustment as compared with the rates imposed upon other kinds of freight? I do not know that they are, but if so, they should be properly adjusted. Yet the railroads must be allowed freight tariffs which will enable them to live and progress to meet the needs of the public; mere existence will not do for them; the demands of the future will be very great, calling upon all of their facilities, present and prospective, to adequately handle traffic. To do the work ahead, the railroads must make money to attract capital; otherwise, they will fail to properly perform it and the public will experience delays, congestions and losses."

"These are facts to be borne in mind in considering rates. The situation as it is does not seem to me to prohibit road building. There could be some effort made to lessen the average length of haul on road materials. For instance, the average haul on sand and gravel is from 60 to 80 miles, while for coal, another bulk material, it is 200 miles. Yet, by obtaining supplies of sand and gravel from points closer at hand some miles could be saved, with consequently less cost for transportation. But if there exists any inequality between the rates for road materials as compared with other freight, it should be removed without question; the thing is to determine its alleged existence."

"Rates, to be satisfactory, must be just to the public, but they must also be just to the railroads; their life depends upon them."

Contract for Gravel Highways in the Delta.

Indianola, Miss., February 24—[Special.]—The Highway Commissioners of District No. 1, Sunflower county, are preparing to let a contract for construction of an additional 17½ miles of

gravel highways on March 2 at the courthouse in Indianola. Highway recently constructed by the commissioners include a system of 13 miles radiating out of Inverness. The construction was performed by Lawrence, Nixon & Phillips of Jackson, Miss., under the supervision of John M. Harbert Engineering Co. of Indianola.

The new stretch of 17½ miles will give District No. 1 a total of 30½ miles of gravel roads, which will permit facility of transportation heretofore impossible during certain periods of the year. The Highway Commissioners under which the work is performed are as follows: P. A. Price, Dr. R. L. Anderson and H. H. Baker.

NORTH CAROLINA ROAD LAW.

Bond Issue, License Fees and Gasoline Tax Provide Funds for Operation.

Raleigh, N. C., February 28—[Special.]—The North Carolina State road law, just passed, provides for the construction and maintenance by the State of a State system of hard-surfaced and other dependable roads connecting by the most practical routes the various county-seats and other principal towns of every county in the State; also connecting with the State institutions and with the roads through State parks, national forest reserves and linking with the State highways of adjoining States.

A \$50,000,000 bond issue is authorized toward the construction of this State highway system, and the funds derived from motor vehicle license fees, plus a one-cent gasoline tax, are to be used for the support of the State Highway Commission, paying the interest on the bonds and the maintenance of the State system of highways. Ten million dollars are to be sold during 1920 and 1921, and more than this if the State Highway Commission can expend more money.

The State is to be divided into nine construction districts, to which the construction funds are to be apportioned on the same basis as the Federal-aid apportionment; that is, one-third in the ratio of the area of each construction district to the entire area of the State; one-third in the ratio of the population of the district to the entire population of the State, and one-third in the ratio of State highway mileage of the district in proportion to the total mileage of State highways.

The State Highway Commission is given ample power for acquiring rights of way, taking over the State system from the counties, acquiring and operating quarries, etc., for procuring material to be used in constructing and maintaining this system.

Provision is made for the appointment of a State Highway Commission consisting of 10 members, one from each of the nine construction districts and one from the State at large. The term of office of the present State Highway Commissioner, Mr. Frank Page, is not interfered with. There is also a provision for the working of all able-bodied male State convicts on the State highways. The bill contemplates the construction and maintenance of approximately 5500 miles, and is believed to be the most constructive measure ever enacted by a North Carolina Legislature.

Georgia Plans Big Road Program.

Atlanta, Ga., February 28—[Special.]—The year will probably see the continuation of progress which in 1920 raised this State from sixteenth among the States to fifth in road building and maintenance.

Figures from the State Highway Department show that last year a total of 114 miles of paved roads were built, more than 300 miles of sand-clay road, a dozen bridges and over 100 miles of roadway was taken over for maintenance.

If the bill providing Federal aid, which has passed the House, is approved by the Senate and signed in the White House, Georgia's 1921 program will be the largest in her history.

By the middle of spring the State Highway Department will be at work in every county of the State, according to an announcement by W. R. Neel, State Highway Commissioner. Where it does not begin new construction it will maintain roads.

RAILROADS

Revival of an Old Railroad Rumor.

A revival of an old rumor that the Western Maryland Railroad would endeavor to obtain a tidewater terminal on the Potomac River appears in a dispatch from Washington published in the Baltimore Sun, which says that Colin H. Livingston has laid before the Interstate Commerce Commission a plan to enable the road to reach Alexandria, Va., over the Washington & Old Dominion Railroad, which runs from Alexandria to Bluemont, Va., 52 miles. The idea is that the Western Maryland would obtain trackage rights over the Baltimore & Ohio Railroad from Cherry Run, W. Va., to Point of Rocks, Md., and from there build an extension of 15 miles, including a bridge over the Potomac River, to Leesburg, Va., connecting there with the Washington & Old Dominion Railroad, which would be used to Alexandria, 35 miles. Mr. Livingston, according to the dispatch, proposes that the yards of the Virginia Shipbuilding Corporation at Alexandria, in which concern he is interested, shall be used for terminals.

Inquiry at the offices of the Western Maryland Railway in Baltimore failed to develop any information upon the subject, which appears to be at present entirely an idea. It may be noted, however, that several years ago a similar proposition was broached, excepting that the Western Maryland, according to reports then current, contemplated building its own line from Cherry Run to a connection somewhere on the line of the Washington & Old Dominion Railroad, and furthermore, that the tide-water terminal would be at Washington.

Still another report, also circulated some time ago, said that the Western Maryland would gain entrance to Washington by building a connection in Baltimore with the Washington, Baltimore & Annapolis Electric Railway, and use that line to the National Capital.

Nothing came of these rumors, and, owing to the present financial condition of railroads generally and the indisposition of capital to invest in them until there is definite assurance as to their future, it seems improbable that any extension work will be undertaken for a considerable period.

Southern Roads Show Best Net Earnings.

Reports from the railroads to the Interstate Commerce Commission show that their net railway operating income for December was only \$17,037,000, or practically \$70,000,000 less than the estimate made as to the probable earnings of the roads under the increased rates, the idea being to give them 6 per cent net on their valuation. Out of 202 roads reporting, 88 failed to earn expenses. Total operating revenues for the month were \$550,608,000, or 21½ per cent more than in December, 1919.

The net operating income in every district fell considerably below 6 per cent. In the East it was 94½ per cent less, in the West 80.7 per cent and in the South 47.3 per cent. Thus the South shows 3 4-25 per cent net instead of 6 per cent, the East but slightly more than one-third of 1 per cent, and the West less than 1½ per cent.

Complete reports from the Southern district show total operating revenues of \$87,790,000, or 19½ per cent more than in December, 1919; total operating expenses, \$77,104,000, an increase of 18% per cent, and net operating income of \$7,676,000, an increase of 32.1 per cent.

New Record in Freight-Car Loading.

The railroads in December established another new record in the average load carried by each loaded freight car, viz., 31½ tons, or an increase of seventh-tenths of a ton, as compared with the previous record, which was made in November, according to reports compiled by the Bureau of Railway Economics. This is 1½ tons higher than the 30-ton goal proposed by the Association of Railway Executives last year. Moreover, this new record is 3½ tons above the average of December, 1919.

RAILROAD EARNINGS FOR 1920.

Expenses During Year Were 93.59 Per Cent of Operating Revenue.

Washington, February 28,

Railroads of the United States earned \$62,264,421 in 1920, against \$516,290,000 in 1919, according to figures given out today by the Interstate Commerce Commission.

The railroads' expenses last year were 93.59 per cent of their operating revenues, as compared to 85.25 in 1919. During 1920 railway operating revenues were \$6,225,402,762, as against \$5,184,064,221 in 1919.

The total operating revenues, as shown by the Commission's figures, were almost wholly absorbed by expenses and taxes. The operating expenses represented an increase of \$1,406,000 over the previous year. Taxes were \$281,380,620, an increase of \$82,000,000; rentals were \$54,333,673, and uncollectible revenues were \$1,226,574.

Freight revenues were \$4,325,078,866, an increase of \$768,000,000, while passenger revenues were \$1,288,808,159, an increase of \$108,000,000.

The principal items in expense were maintenance of way and structures, amounting to \$1,033,548,881, an increase of \$255,000,000; maintenance of equipment, which included repairs to cars and engines, amounting to \$1,584,405,718, an increase of \$352,000,000, and conducting transportation, which includes wages of trainmen, fuel and other supplies, amounting to \$2,307,187,529, an increase of \$715,000,000.

Deal Pending for a Texas Road.

Austin, Tex., February 25.—[Special.]—That under the reorganization of the Missouri, Kansas & Texas Railroad, which is to take place soon, the San Antonio, Uvalde & Gulf Railroad will be purchased and become a part of that system is practically admitted by high officials of the two companies. The San Antonio, Uvalde & Gulf road is owned by the estate of John T. Milliken, wealthy mine owner of St. Louis, Mo. It is in the hands of a receiver, and has been on the market ever since Mr. Milliken died. John G. Lonsdale of St. Louis, executor of the Milliken estate, accompanied by representatives of financial interests that are promoting the reorganization of the Missouri, Kansas & Texas System, have just completed an inspection of the San Antonio, Uvalde & Gulf Railroad, and upon their return were met at San Antonio by C. N. Whitehead, chief operating officer of the Missouri, Kansas & Texas Railway. Beyond stating that a reorganization of the latter company is now under consideration, Mr. Whitehead had no announcement to make.

The San Antonio, Uvalde & Gulf Railroad runs from San Antonio to Corpus Christi on the Gulf Coast, 149.5 miles; from Pleasanton to Crystal City, 113.8 miles, and from Uvalde to Carrizo Springs, 53 miles. By extending this last line from Carrizo Springs to Eagle Pass, the Missouri, Kansas & Texas would obtain a direct outlet to Mexico. The present mileage of the San Antonio, Uvalde & Gulf is 316 miles.

Too High Expenses Compel Receivership.

The Atlanta, Birmingham & Atlantic Railway was placed in a receivership last Friday by the United States Court at Atlanta, Ga., Col. B. L. Bugg, president of the road, being made receiver. The order of the court creating the receivership was upon a petition from the Birmingham Trust & Savings Co. of Birmingham, Ala., claiming that it held a \$90,000 note of the railroad company, which it could not pay on March 7, when due.

"The railroad company," says a report from Atlanta, "agreed to the receivership, and the proceedings are a sequel to the company's announcement on January 1 that wages would be reduced on February 1, followed by a protest of its employees that went before the Railroad Labor Board, and the refusal of the Board to assume jurisdiction over the wage dispute."

"This is the second time that the road has been in the hands of the court. It was under a receivership from 1909 until 1916. In 1916 it made money, it was stated, and was taken out of the hands of the receiver. Federal control followed in 1917."

"In its petition the Birmingham Trust & Savings Co. said that,

although the road's gross receipts were \$9000 a mile a year, it was losing \$100,000 a month, and that its only salvation was for the court to take charge."

A director of the railroad company is quoted as saying: "Most of the loss sustained is due to the high wages paid. The road did not benefit with other roads in the freight-rate increase, for it hauls few passengers and little milk, on which the increases were heaviest." He is further quoted as follows:

"The road's finances are in good shape. Its bonded debt is \$8,633,907, and it needs but \$204,000 to meet its fixed charges. There is \$30,000,000 of stock."

President Bugg is reported as saying: "The payroll has increased almost threefold for every employee since the war. More than 1,000,000 people are served by the road exclusively. If it was scrapped they would be without rail transportation."

The Atlanta, Birmingham & Atlantic Railway is 451 miles long from Birmingham, Ala., to Brunswick, Ga., on the seacoast. A branch from Manchester, Ga., extends northward to Atlanta, 78 miles. Through trains are operated between Atlanta and Brunswick, 331 miles, and Birmingham and Manchester, 198 miles. There are also branches from Fitzgerald to Thomasville, Ga., 81 miles, and from Nichols to Waycross, Ga., 29 miles.

A Railroad Man of the Old School.

Milton H. Smith, president of the Louisville & Nashville Railroad Co., who died last week at his home in Louisville, Ky., was 84 years of age, and had been chief executive of the system since March 9, 1891, practically 30 years. Mr. Smith was born in Green county, New York, September 12, 1836. He was a railroad manager of the old style, and the great progress of the system of railroads of which he was the head was mainly due to his unbounded energy, ability and determination, combined with unremitting attention to his official duties. His father, a farmer, removed his family to Illinois, but M. H. Smith, not liking farm work, learned telegraphy and obtained employment with the Mississippi Central Railroad at Holly Springs, Miss., before he was 20 years old, and his railroad career was always identified with the South, to the reconstruction and upbuilding of which he was devoted. During the Civil War he became master of transportation of all railroads controlled in the South by the Federal Government, and when peace came he was made freight agent at Louisville for the Louisville & Nashville Railroad, continuing with it for the rest of his life, excepting for a period of about three years, when he was with the Baltimore & Ohio Railroad as general freight agent from October, 1878, to October, 1881, and with the Pennsylvania Railroad for two or three months as general agent at New York.

It is related that Mr. Smith's absence from the Louisville & Nashville road was the result of an overruling of one of his embargo orders during the yellow-fever epidemic of 1878. He immediately resigned his position as general freight agent and went with the Baltimore & Ohio, a similar position being given him there. When he returned to the Louisville & Nashville, in January, 1882, it was as chief traffic officer, with the title of vice-president. From 1883 to 1886 he temporarily filled the office of president, and in 1891 he was again elected to that position, and thereafter was annually re-elected. During the last year or two many of the president's duties have been looked after by W. L. Mapother, executive vice-president, who, it is expected, will now be elected to the presidency of the system.

New Equipment, Etc.

A loan of \$260,750 to the International & Great Northern Railroad has been authorized by the Interstate Commerce Commission for new equipment, additions and betterments, which will cost a total of \$521,500.

Louisiana & Arkansas Railway has ordered 25 Hart convertible dump cars from the American Car & Foundry Co.

Atchison, Topeka & Santa Fe Railway is reported in the market for 1000 gondola cars of 50 tons capacity.

Missouri Pacific Railroad has ordered from the American Bridge Co. 150 tons of plate girder spans.

Atlantic Coast Line is reported in the market for 3000 tons of rails.

Interurban Railway Merger Approved.

The Maryland Public Service Commission has approved the proposed merger of the Annapolis Short Line with the Washington, Baltimore & Annapolis Electric Railway, and the plan of consolidation previously announced will be carried out immediately. There will be some changes in the electrical equipment of the Short Line cars to make them conform to the standards of the other road, but service will be continued on the Short Line as now, with some track improvements. The merger, it is said, will effect economies for both roads, but without any reduction of facilities. The Short Line is 25 miles long, which will now put a total of nearly 150 miles of interurban electric railway tracks under one management.

The Washington, Baltimore & Annapolis Electric Railway has issued \$1,400,000 of two-year 7 per cent mortgage and collateral trust notes, dated March 1, which are being offered to investors. The proceeds of the issue, it is stated, are to be used to complete terminals in Baltimore and Washington, made necessary by increased traffic; to retire obligations therefor, and for other corporate purposes. The loan is to be secured by a collateral trust covering a deposit of first mortgage 5 per cent bonds of the company to the par value of \$1,600,000, and by other security.

In connection with this issue of notes it is stated that the acquisition of the Annapolis Short Line gives the company the exclusive right to supply the city of Annapolis with gas, electric and railroad facilities.

Fares, Etc., Raised to the Interstate Rate.

Fares for passengers, baggage allowances, minimum ticket charges and penalty charges in North Carolina are to be advanced to an equality with interstate rates of the same classes by March 29 under an order of the Interstate Commerce Commission. The passenger fare has been 3 cents a mile, and it will be raised to 3.6 cents, and instead of 200 pounds of baggage being carried free, the amount will be reduced to the interstate basis of 150 pounds. The minimum ticket charge will be raised from 5 cents to 12 cents. The added charge on fares paid on trains will be 15 cents, instead of 18 cents, as was proposed. A like order was also issued by the Commission in the case of fares, etc., in South Carolina.

It should also be noted that the switching charge has been raised to \$2.50 per car; the rate within the States had been \$1 to \$1.50.

Lines Proposing to Negotiate Loans.

The St. Louis-San Francisco Railroad Co. has requested authority of the Interstate Commerce Commission to issue \$4,232,000 of 6 per cent prior lien bonds to be sold at not less than 90 and pledged at not less than 75.

Southern Railway Co. has asked for authority to pledge as security for short-term notes \$7,229,000 of 4 per cent development and general mortgage bonds held in its treasury.

Wheeling & Lake Erie Railway Co. has asked for authority to pledge as collateral for short-term notes any securities held in its treasury.

Road to Be Again Put Up at Auction.

The Valdosta, Moultrie & Western Railroad, 42 miles long, from Valdosta to Moultrie, Ga., was offered at auction last week in Valdosta under receivership proceedings, but not a bid was received. It is said that the line will again be offered for sale in about a month, with the added proviso that the purchaser may abandon operation and sell the track materials and equipment. The upset price last week was \$165,000, and the condition of the sale was that the road should continue to be operated. J. W. Talbert is the commissioner in charge. Robert W. Murray is the receiver.

Sale of a Small Line.

A report from Montgomery, Ala., says that the Washington & Choctaw Railway, 10½ miles long, from Bolinger to Aquilla, Ala., has been bought by the Cochran Lumber Co. of Meridian, Miss., and that it will continue to be operated as a common carrier, according to information received by the Alabama Public Service Commission. B. H. Bolinger of Shreveport, La., has been president of the road.

March 3, 1921.

MANUFACTURERS RECORD.

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TEXTILE**Big Hosiery Mill at Knoxville, Tenn., to Be Placed in Full Operation.**

It is expected that about March 15 all departments of the hosiery mill of the Holston Manufacturing Co. at Knoxville, Tenn., will be in full operation, some machinery having already been installed and now running.

Construction work was begun September 10 by the contractor, the Aberthaw Construction Co. of Boston, Mass. The completed plant comprises four buildings, grouped together—one, a 4-story structure, 80x200 feet, for the knitting mill; another, two stories high, also 80x200 feet, for dye works; the third, a 2-story, 40x40-foot boiler plant; the fourth, one story in height, 40x40 feet, for offices.

The equipment will include 160 knitting and looping machines, the first of these having begun manufacturing. The dyeing plant is completely organized and work is about to begin, to be followed in quick succession by the operation of the finishing and paper box department, and the "boarding" or hosiery-shaping room.

The proposed daily capacity of the completed plant is 2000 dozen pairs of children's hose, and it is expected to employ 300 to 350 operatives. Lockwood, Greene & Co. of New York and Boston were the engineers. F. A. Weiss is president of the Holston Manufacturing Co., with main offices at Lenoir City, Tenn.

Textile Mill Notes.

A stockholders' meeting has been called by the Woodstock Cotton Mills of Anniston, Ala., to consider a proposal to issue \$200,000 bonds.

The W. A. Handley Manufacturing Co. of Roanoke, Ala., is now operating on a full week-day schedule. The installation of 28 new looms and other equipment is being completed.

New plumbing installations have been completed by the Kenyon Plumbing & Electric Co. of Anniston, Ala., for Nos. 1 and 2 mills of the American Net & Twine Co. at Blue Mountain, Ala.

Construction has begun upon the plant of the McEachern Cotton Mill Co. of St. Pauls, N. C., and it is expected that operations will begin toward the close of the year. The equipment will include 5000 ring spindles. The company was incorporated in April, 1920, with \$300,000 capital, A. R. McEachern being president, and J. M. Butler, treasurer.

The Morice Twine Corporation of Delaware has been chartered in Virginia with \$250,000 capital to acquire the Twine Mill Corporation of Roanoke, Va. It is understood that the plant will be enlarged, the number of operatives increased, and the manufacture of twine continued. E. L. Hege of Roanoke, has been named resident manager. The Roanoke mills have an equipment of 11,750 spindles.

A dispatch from Fitzgerald, Ga., states that the Fitzgerald Cotton Mills of that city are now employing 300 operatives, or two shifts daily, on the entire 13,500-spindle plant, due to a revival in demand for their products, comprising ducks, drills and sheeting. It is further stated that this is the first time the mills have been in full operation since the peak of the early war demand was passed. The present rush orders for goods will probably provide steady employment for several weeks at least.

A large addition, with all modern facilities, has recently been completed by the Couch Mills Co. of Atlanta, Ga., providing employment for 600 additional operatives. A recreation park for the benefit of the employees is now being laid off adjoining the plant. The Couch Cotton Mills were reported in these columns in June, 1920, as organized with \$2,500,000 capital and surplus for the purpose of consolidating the Couch Mills Co. of Atlanta with the Beaver Duck Mills of Greenville, S. C., and the Beaver Cotton Mills of Thomson, Ga. W. D. Couch is president.

The Cotton Movement.

In his report of February 25, 1921, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 209 days of the season was 7,722,026 bales, a decrease from the same period last year of 2,278,775 bales. The exports were 3,300,313 bales, a decrease of 1,051,819 bales. The takings by Northern spinners were 1,011,956 bales, a decrease of 1,091,354 bales; by Southern spinners, 1,909,063 bales, a decrease of 967,867 bales.

Southern Pine Lumber Sales Continue Good.

New Orleans, La., February 28—[Special.]—For the week ending February 18, reports of the activities of 139 lumber mills of the Southern Pine Association indicate receipt of orders for the week amounting to 2923 cars, containing 63,399,870 feet, compared with sales for the previous week at 135 mills amounting to 2692 cars of 56,876,576 feet, and orders reported for the week ending February 4 by the same number of mills for 2941 cars of 62,137,448 feet.

The report for the week is as follows:

	Cars.	Feet.
Orders on hand beginning of week.....	10,544	238,699,360
Orders received during week.....	2,923	63,399,870
Total	13,467	292,099,230
Shipments during week.....	2,855	64,093,360
Orders on hand end of week.....	10,512	228,006,280
Orders		Total feet.
Shipments		63,399,870
Production		64,093,360
Normal production these mills.....		66,090,112
		93,878,112

Shipments were 3.02 per cent below production for the week, and orders were 4.07 per cent below production. Orders were 1.08 per cent below shipments.

The actual production was 29.60 per cent below normal, and shipments were 31.73 per cent below normal production. Orders were 32.47 per cent below normal production, and the decrease in "orders on hand" for the week amounted to .30 per cent.

Production of Coal and Coke.

During the week ended February 19 the output of bituminous coal amounted to 7,472,000 net tons, a decrease of production as compared with the preceding week of 395,000 tons, or 5 per cent, according to the weekly report of the United States Geological Survey. Production of anthracite coal continued almost at capacity of the mines, the total being 2,010,000 net tons for the week, a decrease of only 38,000 tons as compared with the previous week. The production of beehive coke continued to decline because of lack of demand, the output for the period being estimated at 219,000 net tons, a decrease of 9000 tons.

Preliminary returns received by the Geological Survey show that the total production of coke at by-product plants during 1920 was 30,908,000 net tons, an increase of 5,764,000 net tons as compared with 1919, and 4,910,000 more than in 1918, which had been the record year. During 1920 more than 850 new ovens were put in operation, and 580 more were under construction at the end of the year.

As the output of beehive coke is estimated at 20,980,000 tons, the total of all coke (except gashouse coke) was 51,888,000 tons, of which a little more than 40 per cent was made in beehive ovens and nearly 60 per cent in by-product ovens.

Flour Mill and Elevator Wanted.

Ballinger, Tex., February 23—[Special.]—The Young Men's Business League of this city is making determined efforts to have a flouring mill and elevator located here. A free site and trackage will be provided if the proper kind of plant can be secured. In 1919, 900,000 bushels of wheat were raised in this county, together with 3,500,000 bushels of oats. The 1920 crop of wheat was about 400,000 bushels, with 900,000 bushels of oats. During each of these years an average of 400,000 tons of grain sorghums were raised.

Ballinger is a railroad common point, a milling transient point, and the Abilene Southern and the Santa Fe have affiliations.

MECHANICAL

Improved Elevator Engine.

The Westbrook single-wrap traction elevator engine here shown is described as being the result of careful study and tests by competent engineers, with the engine of rugged and substantial design and constructed of the best materials. It is of the worm-and-gear type, the gear made of bronze, fastened to the driving sheave spider with turned bolts that are fitted in reamed holes. To prevent the gear rim from working loose after being fastened to the spider, the threads are riveted over, or upset. The worm and shaft is a one-piece solid steel forging. Both the threads of the worm and gear teeth are milled in the latest design Gould & Eberhardt's gear-cutting machine, insuring great accuracy.

In operation the gear thrust is taken on the worm shaft by a heavy-duty S. K. F. double acting ball bearing arranged with self-aligning hardened steel washers, supported in the worm-shaft bearing and fastened to the gear-case worm barrel farthest from the motor. This arrangement, it is observed, insures accessibility to the bearing without dismantling the engine. Both the worm and gear are encased in a cast-iron housing and run in a bath of oil, the gear case being so arranged that all bearings are self-oiling. The lateral gear thrust is taken on the driving-sheave shaft bearings by thrust grooves turned in the shaft and by the babbitted engine bearings.

The driving sheave is of best gray iron turned true, and the V grooves are then milled by special cutters arranged to mill the grooves at one operation for as many ropes as are to be used. This insures the accuracy of each groove, as well as maintaining accurate rope centers for each hoisting rope.

In developing this type of elevator engine, to replace the drum type, the factors determining results were safety, reliability, efficiency and cost of production. It is said to be impossible to pull the car into the overhead work and allow the car to fall by pulling out the rope anchors. The engine has the fewest parts consistent with proper design, and the V grooves on the driving sheaves permit of closer counter-balancing, so that the power consumption is reduced. Installation is also, it is stated, made possible at a reduced cost. This engine is manufactured by the Westbrook Elevator Manufacturing Co., Inc., Danville, Va.

Big Irrigation Projects in Mexico.

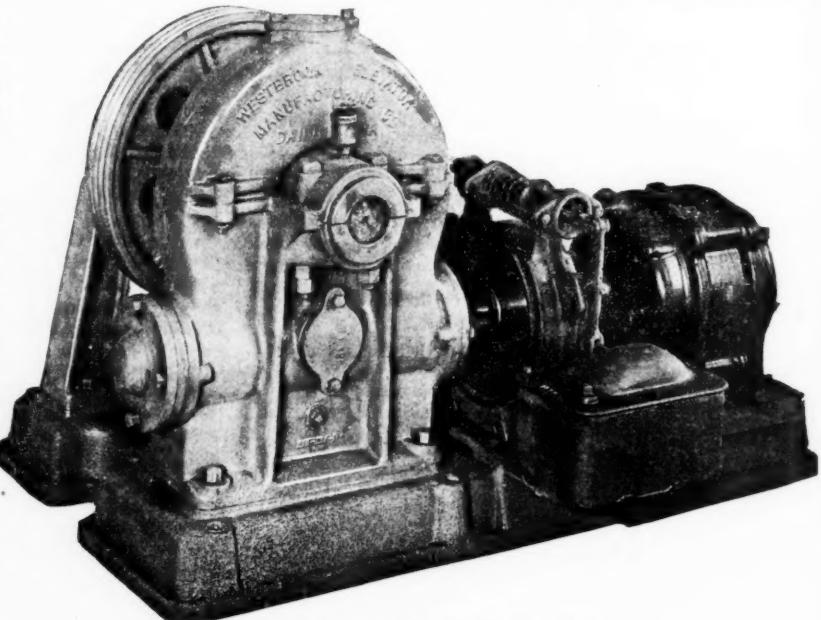
Santa Rosalia, Mex., February 14—[Special.]—According to Benjamin R. Enriquez, chief engineer of the irrigation department of the State of Chihuahua, the water supply created by the great dam on the Conchos River at Boquillas, about 18 miles from here, is to be used for irrigating more than 200,000 acres of rich land of the Conchos River Valley. This dam and the large hydro-electric plant operated in connection with it, were built by the Northern Mexico Power Co., composed of Canadian financial interests. The main canal will be about 130 miles long. The water will be used after it passes through the turbines of the hydro-electric plant and in no way will the irrigation project interfere with the generating of electric power, it is explained.

Mr. Enriquez also says that the State Government plans to build a dam across the San Pedro River at a cost of \$15,000,000, the reservoir to have a capacity of 1,000,000,000 cubic feet of water and used for irrigating an enormous acreage of semi-arid land.

Active in Building Naval Vessels and Merchant Ships at Newport News Yards.

Newport News, Va., February 28—[Special.]—During 1920 six oil tankers, freight and passenger vessels, totaling 61,584 gross tons; one battleship of 32,600 tons displacement, and four torpedo-boat destroyers of 1200 tons displacement each were launched at the plant of the Newport News Shipbuilding & Dry Dock Co.'s plant.

Four oil-tankers, including the Salinas, Sepugla, Tippecanoe and Trinity, each of 8246 gross tons, were launched and completed



ELEVATOR ENGINE READY FOR SERVICE.

and later delivered to the United States Shipping Board. Two passenger and freight vessels of 20,000 tons displacement and of 14,300 gross tons were also launched for the Shipping Board, and one, the Golden State, has been delivered and accepted and is now on her maiden voyage to the Pacific, having sailed this month from Baltimore with a cargo of miscellaneous freight and a large number of passengers. The Silver State, a sister ship, is now being completed.

The battleship Maryland, of 32,600 tons displacement, has been launched, and is now being fitted up and finished for the United States Navy. A sister ship, the West Virginia, is now under construction at the yards. In addition, the battleship Iowa, of 35,000 tons, is also on the building ways, as is the battle-cruiser Constellation, of 43,200 tons. The keel will shortly be laid for a sister ship, the Ranger. Thus the naval ships under construction at the yard are five, amounting to a total of 186,000 tons displacement.

The four torpedo-boat destroyers that were launched during the past year and have been delivered are the Abel P. Upshir, Hunt, Welborn C. Wood and George D. Badger, making a total of 4800 tons displacement.

Besides the naval vessels under construction, four oil-tankers, two of 10,900 tons and two of 13,000 tons, are being built for the Atlantic, Gulf & West Indies Steamship Co. and the Standard Oil Co. of New Jersey, respectively. The boats for the steamship company are the Agwistone and Agwismith, and those for the oil company are the John D. Archbold and William Rockefeller.

Besides these merchant vessels, there is the Silver State, already mentioned, making a total of five vessels of 62,100 gross tons now under construction.

At the present time about 9000 men are employed at the big plant in its various departments, most of which are being operated on one shift daily.

March 3, 1921.

Ships

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Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Ala., Rockford.—Let contract for building bridge over Chipco Creek. Address Coosa County Commsr.

Ga., Augusta.—Will build bridge over Savannah River; steel and concrete; Federal-aid Project 127; \$229,000; low bidders for superstructure, Virginia Bridge Co., Roanoke, Va.; substructure, A. J. Twiggs & Sons, Augusta, Ga. Address Richmond County Commsr., Roads and Revenues, Augusta, Ga., and Aiken County Commsr., Aiken, S. C. (Lately noted inviting bids.)

La., Alexandria.—Will build culverts on Section B of Glenmore-Westport road, 9 mi.; bids until Mch. 8; changed date from Feb. 8; J. F. Ball, Prest., Rapides Parish Police Jury; Ira W. Sylvester, Parish Engr. (See Machinery Wanted—Bridge Construction.)

La., Lafayette.—Will construct creosoted wood culverts; bids opened Feb. 28; W. J. Peck, City Clk. and Trustee Public Property.

La., Monroe.—May rebuild Ouachita River bridge between Monroe and West Monroe; \$6,000. Address City Comsu.

Miss., Oxford.—Will build 32-ft. and 18-ft. bridges in Beat 1, and 50-ft. bridge across Yocoma River; bids until Mch. 8; W. M. Woodward, Clk. Lafayette County Supvrs. (See Machinery Wanted—Bridge Construction.)

Mo., Westplains.—Will build 8 bridges; \$2000 to \$7600; Elston, Axon & Russell, Consit. Engrs., Springfield, Mo.

N. C., Pittsboro.—Will build steel truss bridge over Rocky River between Pittsboro and Sanford; bids until Mch. 14; A. T. Ward, Chrmr. Chatham County Commsr.; L. V. Edwards, Civil Engr., Masonic Temple, Winston-Salem, N. C. (See Machinery Wanted—Bridge Construction.)

Okla., Sallisaw.—Will build bridges; vote Mch. 29 on \$20,000 bonds. Address Sequoyah County Commsr.

S. C., Georgetown.—Will build concrete bridges on Georgetown-Andrews road; bids until Mch. 8; W. S. Lewis, Div. Engr., Florence, S. C. (See Machinery Wanted—Bridge Construction.)

S. C., McCormick.—May build bridge at Fury's Ferry over Savannah River. Address, McCormick County Commsr.

S. C., Orangeburg.—Let contract for building two 30-ft. concrete bridges, 8x5 ft. concrete and 6x6 ft. culverts, 30 ft. long, to Storey & Mitchum, Augusta, Ga., at \$14,985; Julian S. Wolfe, Secy., Orangeburg County Highway Bridge Comsan., Orangeburg, S. C. (Lately noted inviting bids.)

S. C., Sand Bar Ferry.—Will build bridge across Savannah River; low bidders, A. J. Twiggs & Son, Augusta, Ga., at \$124,267, for substructure, and Virginia Bridge Co., Richmond, Va., at \$77,700, for superstructure; S.

W. Va., Morgantown.—W. H. Warner & Co., Cleveland, O., has leased 88 acres coal land; will develop.

Concrete and Cement Plants.

D. C., Washington — Tile.—Spanish Mosaic Tile Co., capital \$25,000, inceptd. by Redick W. Ridgely, Margaret S. Calhill, Wm. A. McGuire.

Fla., Fort Pierce.—Florida Citrus Exchange, Chas. Bemenderfer, Local Mgr., will erect packing plant on 1000-acre site; install mech.

Md., Baltimore — Laundry Tubs.—Nustone Products Corp., 508 W. 23d St., has leased 10,000 sq. ft. in building to mfrs. laundry tubs; annual output 10,000; acquired property of Robins Peerless Granite Tub Co.

Miss., Hattiesburg.—American Pickle & Canning Co., J. J. McClure, Mgr., will enlarge plant; install 15 salting stations; single station composed of supply of salt, shed and one or more vats; total cost \$50,000; contemplates canning cane syrup.

N. C., Rose Hill.—Concrete Tiling, etc.—Rose Hill Brick & Tile Co., G. B. D. Parker, Prest., Chinquapin, N. C., will establish plant.

Cotton Compreses and Gins.

Ark., Ogden.—United Oil Mills will probably rebuild ginnery burned at loss of \$10,000.

S. C., Townsville.—O. C. Praeter & Son will probably rebuild burned ginnery.

Tenn., Brownsville.—Brownsville Gin Co. will probably rebuild burned ginnery.

Tex., Coleman.—Hall & Co. will probably rebuild ginnery burned at loss of \$25,000.

Tex., Rule.—Swift Gin Co. will rebuild burned gin.

Cottonseed-Oil Mills.

Ga., Hazelhurst.—Carter Cotton Oil Co. will probably rebuild plant burned at loss of \$100,000.

Okla., Muskogee.—Muskogee Cotton Oil Mill, Geo. H. Walker, Prest., 724 Mill St., will rebuild seed-cleaning house burned at loss of \$12,000.

Tex., Taylor.—Citizens' Cotton Oil Co. increases capital from \$10,000 to \$80,000.

Drainage Systems.

Mo., Trenton.—Grand River Drainage Dist., No. 2, H. J. Bain, Secy., Grundy County; bids opened for construction of drainage ditch with levees and dams; 1,118,800 yds. excavation; Joseph Stewart, Chf. Engr. (Lately noted to issue \$225,000 bonds.)

Mo., Cape Girardeau.—Little River Drainage Dist. Supvrs. let contract to Callahan Construction Co., Dallas, Tex., to construct Sals Creek diversion channel and clearing Caston River from Zeta to head of ditch 39; \$197,075.

Mo., Trenton.—Muddy Drainage Dist. No. 1, H. J. Bain, Secy., Grundy County; bids opened for construction of drainage ditch and levee; 500,000 yds. excavation; Joseph Stewart, Chf. Engr. (Lately noted to issue \$100,000 bonds.)

Mo., Memphis.—Victory Drainage Dist. Supvrs. of Scotland County construct drainage system; main ditch, 54,000 ft. long, 16 ft.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

wide; 395,700 cu. yds. excavation; bids until Feb. 26. (See Machinery Wanted—Drainage.)

N. C., Smithfield.—Government will construct anti-malaria drainage system; \$6300. Address The Mayor.

Electric Plants.

Ga., Cordele.—Will vote Apr. 20 on \$40,000 bonds to erect and equip light and power plant; J. Gordon Jones, Mayor; W. G. Webb, Engr. (Lately noted contemplated.)

Ia., Lake Arthur—Voted \$50,000 bonds to install electric light plant. Address The Mayor. Miss., Pascagoula.—Voted to purchase light and water plants. Address The Mayor. (Lately noted to vote.)

Mo., Warrenburg.—May vote on \$150,000 power plant bonds; F. L. Wilcox, Engr., Chemical Bldg., St. Louis, Mo. (Lately noted.)

Mo., Wheaton.—Wheaton Light, Ice & Cold Storage Co. organized with H. C. Hindman, Mgr.; has 60x60x12-ft. plant; develop 150 H. P.; Ben. Gibson, Engr. (Lately noted inceptd., capital \$40,000.)

N. C., Mount Olive.—Issued \$30,000 bonds to purchase electric light system; T. R. Thigpen, Town Clk.

Okla., Skiatook.—Charles Page, Sand Springs, Okla., R. Harris, Representative, will install lighting system.

Tex., Electra.—Gladoli Oil Co. will probably rebuild power-house burned at loss of \$10,000.

Tex., Fort Worth.—Fort Worth Power & Light Co., A. J. Duncan, Prest. and Gen. Mgr., increased capital \$276,000.

Va., Bristol.—Electric Transmission Co. of Virginia, L. B. Herrington, Prest., increases capital from \$500,000 to \$1,200,000.

Fertilizer Factories.

Tenn., Columbia.—Peerless Agricultural Corp. is reported to erect plant.

Flour, Feed and Meal Mills.

Ky., Mayfield.—Mayfield Milling Co. organized with Leon Evans, Prest. Mgr.; Whit. L. Garner, Secy.-Treas.; will construct fireproof grain elevator; daily capacity 150 bbls. flour; succeeds R. U. Kevil & Sons. (Lately noted inceptd., capital \$50,000.)

Okla., Elk City.—Elk City Mill & Elevator, A. C. Comstock, Mgr., will probably rebuild plant burned at loss of several thousand dollars.

Okla., Oklahoma City.—Oklahoma Terminal Elevator Co., P. L. Jacobson, 610 Grain Exchange, will construct 1,250,000-bu. capacity elevator for storage and conditioning of grain; approximate cost \$450,000; reinforced steel and concrete construction; composition gravel and tar roofing; concrete floors in workhouse; usual heating for grain drier; bids possibly in May or June. (Lately noted)

Foundry and Machine Plants.

Ga., Quitman—Machinery.—Baxley-Colgan Mfg. Co. organized by W. H. Baxley, J. P. Colgan; mfrc. mchry. for chemical works, etc.

Mo., Joplin—Machinery.—P. A. Martin Machinery Co. will erect 100x140-ft. reinforced concrete plant; has plans.

Mo., Kansas City—Pipe.—Kansas City Spiral Pipe Co., capital \$1,000,000, T. L. Croteau, M. A. Bruce, S. E. Dill; all Wilmington, Del.

Mo., St. Louis—Vacuum Street Cleaners.—Waycleanse Co., Miller Smith, Prest., New York, plans to erect \$300,000 plant to mfrc. vacuum street cleaners.

Mo., St. Louis—Stoves, etc.—Bridge & Beach

Mfg. Co., Hudson E. Bridge, Prest., increased capital from \$750,000 to \$1,000,000.

Okla., Cushing—Machine Shop.—Noel Mfg. Co., 119 E. Charry St., capital \$25,000, organized with J. C. Noel, Prest.; W. T. Walker, V.-P.; Chas. E. Droege, Secy.-Treas. and Mgr.; rented building; will install small lathe and drill presses. (See Machinery Wanted—Lathe; Presses.)

Okla., Duncan—Boilers, etc.—John Hoffman, Ardmore, Okla., will establish plant for mfrc. of oil-field boilers and equipment.

S. C., Columbia—Saws.—J. H. Miner Saw Mfg. Co., W. A. Davis, Gen. Mgr., Meridian, Miss., will establish plant to mfrc. and repair pairs saws.

S. C., Columbia—Boilers and Engines.—Tozer Engine Works, T. F. Dial, Prest.-Mgr.; mfrc. and repair boilers and engines; plans to double output; expects to build later. (Lately noted contemplated increase of capital.)

Ala., Greenville.—Croesus Oil Co., capital \$550,000, inceptd., by Broughton Wilkinson.

Ark., El Dorado.—King-Egner Co., capital \$110,000, inceptd. by C. R. Pate, King O'Leary, both Little Rock, Ark.; E. A. Egner, El Dorado.

Ark., El Dorado.—Ardmore-El Dorado Petroleum Co., capital \$200,000, inceptd. by H. L. Dennis, C. M. Grant and John Bruce Cox.

D. C., Washington.—Capitol Oil Co., capital \$10,000, inceptd. by Ellis C. Hightman, John S. Simmons, both Washington; Wm. S. Browning, East Falls Church, Va.

Fla., De Land.—De Land Gas Improvement Co., A. J. Parkhurst, Jr., Gen. Mgr., capital \$120,000, advises has no definite plans for erection of gas plant; probably build next year. (Supersedes recent item.)

Fla., Jacksonville.—Sunny South Oil & Gas Syndicate, capital \$15,000, inceptd. by H. E. and H. T. Austin, both Jacksonville; L. A. Carter, Bunnell, Fla.

Ky., Ashland.—Prindible Petroleum Co., capital \$30,000, inceptd. by John F. Hager, W. G. Fleu and E. K. Kelly.

Ky., Whitley.—Bridge Fork Oil Co., capital \$300,000, inceptd. by W. H. Taylor, H. M. Cline and C. C. Walker.

La., Baton Rouge—Refinery.—Constantin Refining Corp., Tulsa, Okla., will erect refinery and construct pipe line to El Dorado; purchased site.

Mo., Fair Play.—Fairmount Petroleum Co. increased capital from \$300,000 to \$10,000,000; plans drilling deep test in Cedar County.

Okla., Duncan—Refinery.—Lawton Refining Co., G. S. Holloman, Mgr., will establish 1200-bbl. capacity plant; will remove from Lawton to Duncan.

Okla., Enid—Gas Storage.—Enid Gas Storage Co., capital \$15,000, inceptd. by W. A. Williams, F. E. Short; both Enid; Oscar Brauser, Drummond, Okla.

Okla., Perry.—Perry Mill & Elevator Co. plans installing equipment for fuel oil; provide storage facilities for 10,000 bbls.

Okla., Sapulpa.—Lily Gasoline Co., capital \$75,000, inceptd. by M. B. Downs, I. F. McGee and R. V. Rule.

Okla., Tulsa.—Southern Petroleum Co., capital \$50,000, inceptd. by O. N. West, Geo. M. Schick and J. R. Phillips.

Okla., Wilson.—Herbert Oil Co., capital \$100,000, inceptd. by John W. Herbert, Bezu Smiley and Orville E. Murphy.

Tenn., Kingston.—Wiley Oil & Gas Co. increased capital from \$10,000 to \$40,000.

Tex., Austin.—Texas Producers' Oil Co., capital \$550,000, organized with M. L. Witt, Prest.; P. C. Witt, Secy.-Treas.; both Uvalde Tex.; C. Kelly, V.-P., Austin.

Tex., Dallas.—Clark Brothers Oil Corp., capital \$125,000, inceptd. by H. H. and J. P. Clark, M. R. Ferguson.

Tex., Houston.—Blue Banner Oil Co., capital \$40,000, inceptd. by Emmett O'Boyle, L. G. Etheridge and J. A. Blackburne.

Tex., Houston.—Texas-Washington Oil Co. increased capital from \$25,000 to \$300,000.

Tex., Houston.—Texas Oil Co., capital \$100,000, inceptd. by H. P. Cullen, J. E. Duff and R. E. Brooks.

Tex., Port Arthur.—Gulf Oil Corp. plans voting on \$35,000,000 bond issue for plant and line expansion; W. L. Mellon, Prest., Pittsburgh, Pa.

W. Va., Mannington.—Rex Oil & Gas Co. capital \$20,000, inceptd. by D. A. Rymer, C. B. and A. L. De Laney.

Hydro-Electric Plants.

S. C., Greer.—Blue Ridge Power Co., J. C. Cunningham, Public Service Commr., will build power transmission line from Greer to Fairforest, to be owned by city; 13 mi. transmission to be built of No. 2 reinforced aluminum conductor and steel crossarms; develop 44,000 volts; connect Fairforest, Welford, Duncan and Greer; cost \$30,000 to \$40,000; Electrical Constructors Co., Contrs., 26 W. 5th St., Charlotte, N. C.; W. N. Willis, Eng., Spartanburg, S. C.; W. T. Brockman, Mayor, Greer, S. C. (Supersedes recent item.)

Ice and Cold-Storage Plants.

Ala., Birmingham.—Central Ice Co. plans to construct \$10,000 ice-storage plant.

Ark., Booneville.—Booneville Ice & Fuel Co. inceptd. with capital of \$25,000.

Ark., Gurdon.—Gurdon Light & Power Co. will establish ice plant.

Fla., Gainesville.—S. O. Chadwick, Mgr., White House, contemplates installing refrigerating system; daily capacity 1 ton. (See Machinery Wanted—Refrigerating System.)

Fla., Perry.—Perry Meat Packing Co. plans to establish cold-storage plant.

Ga., Dublin.—Dublin Ice Cream Co. let contract to York Mfg. Co., York, Pa., to install 6-ton capacity refrigeration plant.

Ga., Dublin.—Geeslin Ice Cream Factory (lately noted to install refrigerating room) has mchly.; installed.

Ky., Newport.—City Ice Co. will remodel plant and increase storage capacity.

Ky., Whitesburg.—Perry Ice Co. will re-build ice plant burned at loss of \$20,000.

Ky., Whitesburg.—Whitesburg Ice Co. will probably rebuild ice plant; loss \$15,000.

La., Bastrop.—Bastrop Ice & Storage Co. Guy M. Boyd, Mgr., will expend \$25,000 on construction of ice plant.

La., Lafayette.—Lafayette Beverage & Co. will erect plant addition.

La., New Orleans.—Washington Ice Co. will erect plant additions.

Mo., Chillicothe.—Producers' Cold Storage Co. organized with \$31,000 capital; will erect cold storage plant.

Tex., Cuero.—Cuero Packing Co. expend \$50,000 on cold-storage plant and office improvements.

Tex., Dallas.—Marshall Bros., 613 Kentucky St., contemplates installing 10-ton ice-making machine.

Tex., Dallas.—Arctic Ice Co., capital \$75,000, inceptd. by J. E. McEver, L. W. Hinman, G. C. Stubbs.

Tex., Denton.—Alliance Ice Co. will increase plant's capacity.

Tex., Paris.—Velvet Ice Cream Co. will install complete refrigerating system.

Tex., Cuero.—Moore & Sames Co., F. P. Sames, Supt., will erect 40x170-ft. cold-storage plant and warehouse; reinforced concrete foundations, hollow tile with brick pilaster, galvanized iron and composition roofing, 2-ft. milt flooring; \$20,000; construction by owner; Ralph H. Cameron, Archt., Central Trust Bldg., San Antonio, Tex. (Lately noted.)

Tex., Palestine.—Texas Palestine Refrigerating Co., capital \$1,000,000, plans erecting and operating refrigerating plants; Henry J. Deneenbaum, Chmn. of Committee, Houston, Tex.

Tex., San Antonio.—Bexar County Home for the Aged will install ice-making equipment. Address Board of Control.

W. Va., Moundsville.—Moundsville Crystal Ice Co. will remodel plant.

W. Va., Omar.—Main Island Creek Coal Co. contemplates remodeling ice plant.

W. Va., Parkersburg.—Parkersburg Ice Co. will enlarge plant costing \$30,000; Van R. H. Green, Engr., New York City.

W. Va., Wheeling.—Allied Packers Co. contemplated improving the Schenk plant; install refrigerating system.

W. Va., Williamsport.—William H. Miller and Grason Steffey contemplate organizing \$25,000 company; to establish ice mfg. plant.

Land Developments.

Ala., Geneva.—Spring Creek Land Co., capital \$10,000, inceptd. by W. O. Mulkey.

Ark., Fayetteville.—Government will expend \$600 to improve National Cemetery; install water; pave street; repair lodge; E. W. Grisom, Cemetery Curator.

Fla., De Land.—Jas. E. Alexander plans developing 40-acre site on Lake Winnemissett in orange groves.

Mo., Springfield—Will expend \$1000 to improve Lafayette Park; install rest rooms; J. R. Whitlock, Supt. City Parks.

Mo., Springfield—Will expend \$1000 to improve Lincoln Park; J. R. Whitlock, Supt. of City Parks.

Mo., Springfield—Will improve Phelps Grove Park; enlarge zoo; J. R. Whitlock, Supt. of City Parks.

Okl., Chacotah.—Will develop 200 acres for public park. Address The Mayor.

Tenn., Rockwood.—Molyneaux Lumber Co. capital \$10,000, inceptd. by Harry Molyneaux, Isaac Eachus, Fred G. Haggard.

Tex., Corpus Christi.—Bay View Cemetery Assn., Mrs. W. H. Griffin, Prest., contemplates improving New Bay View Cemetery.

Lumber Manufacturing.

Ala., Huntsville.—Friedlander & Oliver will rebuild burned cedar mill; expend \$20,000 to \$3,000; Lucien Hewlett in charge.

Ark., Texarkana.—Bishop-Johnson Lumber Co. capital \$50,000, inceptd. by E. J. Nixon, G. W. Bishop, R. W. Johnson.

Fla., Jacksonville.—Timber Conservation Corp. capital \$150,000, inceptd. with J. P. Weston, Prest.-Gen. Mgr.; Thomas B. Adams, V.P.; B. M. Turner, Secy.-Treas.

Fla., Waldo.—Coleman Mfg. Co., capital \$10,000, inceptd. with J. W. Coleman, Prest.; A. J. Stowers, V.P.; J. C. Weimer, Jr., Secy.-Treas.

Ga., Douglas.—Willacoochee Lumber Co., capital \$50,000, inceptd. with B. G. Oberry,

Prest.; J. E. Gaskins, V.P.; M. F. Brice, Secy.-Treas.; Wm. Carver, Gen. Mgr.

Tex., Conroe.—Cochran Lumber Co. increased capital from \$20,000 to \$50,000.

Tex., Dallas.—Lakewood Land Co. increases capital from \$10,000 to \$50,000; change name to Imperial Land Co.

Tex., Houston.—Spinner-Hay Lumber & Building Co. increased capital from \$10,000 to \$20,000.

Va., Bristol.—Liberty Lumber & Mfg. Co., B. D. Culton, Secy., increased capital from \$15,000 to \$25,000.

W. Va., Sutton.—Elk Lumber Co., capital \$25,000, inceptd. by R. M. Johnson, F. M. Barnett, A. L. Morrison.

Metal-Working Plants.

Ala., Gadsden—Wire.—Chamber of Commerce interested in establishing wire-making plant.

Ga., Valdosta Gas Saver.—Valdosta Specialty Co., capital \$5000, inceptd. by H. R. Dasher, A. C. Mizell, E. R. Barber; mfrs. carbon remover and gas saver.

Md., Baltimore.—Standard Sanitary Mfg. Co., Pittsburgh, Pa., contemplates establishing branch plant.

Md., Baltimore—Cans.—Phelps Can Co., Lawrence St., let contract to C. L. Stockhausen Co., Gay and Water Sts., to erect 1-story 177.10x112.7-ft. brick factory building costing \$32,000.

Tex., Rogers—Watch Works.—Rogers Watch Works Co., capital \$60,000, inceptd. by J. B. Durrett, L. E. Countess, T. C. Hendrick.

Va., Danville.—Bottle Openers.—Johnson Mfg. Co. organized with J. A. Johnson, Prest.; W. A. McCallan, V.P.; both South Boston, Va.; N. S. Hazelwood, Secy.-Treas., Danville; mfrs. bottle openers.

Va., Danville.—Johnson Mfg. Co., capital \$25,000, inceptd. with J. A. Johnson, Prest.; N. H. Hazelwood, Secy.-Treas.

W. Va., Huntington—Thermos Bottles.—American Thermos Bottle Co., William B. Walker, Prest., Madison Ave. and 46th St., New York; contemplates establishing plant.

W. Va., Huntington—Monel Metal.—International Nickel Co., 43 Exchange Place, New York, and Bayonne, N. J., let contract to Hatfield Construction Co. at \$85,000 for placing concrete foundations for buildings, runways and bases for machinery. (Previously noted to erect plant reported to cost from \$3,000,000 to \$5,000,000.)

W. Va., Moundsville—Metals.—United States Stamping Co., capital \$1,000,000, inceptd. by J. A. Boyd, Moundsville; William L. Gilleland, H. C. Ogden, both Wheeling, W. Va.

Mining.

Ark., Batesville—Manganese.—White River Manganese Co., W. J. Rinchart, Prest., increased capital from \$20,000 to \$50,000; will rebuild mills, install mch'y. for manganese mining.

N. C., Bostic—Sand.—Second Broad River Sand Co., Jackson City, Tenn., established plant; have installed steam hoister, tipple, etc.

Tenn., Graysville—Lime.—Will H. Fox contemplates establishing lime plant. (See Machinery Wanted—Lime Plant; Hydrating Machinery.)

Va., Buffalo Station—Quarries.—Nelson Stone Co., capital \$50,000, inceptd. with L. A. Bodine, Prest.; B. N. Bodine, Secy.

Va., Richmond—Mining.—Anselmo Mining Corp., capital \$2,000,000, inceptd. with Leo H. Blanck, Prest., Essex Falls, N. J.

Va., Staunton—Marl.—Farmers Marl Lime Co., capital \$150,000, inceptd. with C. J. John, Prest., Ashland, Va.; W. J. Chapman, Secy., Staunton.

Miscellaneous Construction.

Ark., McGehee—Levee.—Southeast Arkansas Levee Dist., H. Thane, Secy.; issued \$400,000 bonds for levee construction.

N. C., Wrightsville Beach, P. O. Wilmington—Jetties and Buttresses.—Thos. H. Wright, Mayor, will construct system of jetties and buttresses to reclaim part of ocean front; contemplated bond issue.

Tenn., Humboldt—Swimming Pool.—E. A. Craddock will construct 50x150-ft. concrete swimming pool.

Tex., Freeport—Levee.—Will enlarge present levee system, totaling 425,000 yds. of embankment; invites bids; plans on file with E. C. King, Town Clk. Lately noted voted \$133,000 bonds. (See Machinery Wanted—Levee Construction.)

Va., East Radford—Swimming Pool.—W. H. Zink will construct swimming pool, build bathhouses, etc., in amusement park.

Miscellaneous Enterprises.

Ala., Birmingham—Plumbing and Heating.—Williams Plumbing & Heating Co., capital \$5000, inceptd. with E. M. Williams, Prest.-Treas.; H. B. Woolf, V.P.; R. S. Williams, Secy.

Ala., Tuscaloosa—Fire Equipment.—Will vote Mech. 28 on \$14,000 bonds for fire equipment, engine, etc. Address The Mayor.

Fla., Bunnell—Construction.—Pidgeon Harbor Co., capital \$500,000; J. N. Pidgeon, Prest.; A. G. Harper, V.P.; G. C. Dennis, Secy.

Fla., Jacksonville—Printing.—Anderson & Enge, capital \$15,000, inceptd. by Roy J. Anderson, Axel and Noble Enge.

Fla., Miami—Construction.—Shenandoah Improvement Corp., capital \$200,000, inceptd. with W. E. Gates, Prest.; Wells A. Hutchins, V.P.; C. H. Ward, Secy.-Treas.

Fla., Miami—Smith Co., capital \$100,000, inceptd. by Chas. L. Briggs, Avery C. Smith, Jas. C. Warr.

Ga., Atlanta—Laboratories.—Southern Laboratories increased capital from \$10,000 to \$25,000.

Ga., Columbus—Potato Curing.—Chamber of Commerce interested in establishing sweet-potato curing plant.

Ga., Columbus—Construction.—Columbus Builders, capital \$5000, inceptd. by T. P. Dozier, Leland J. Henderson, Lawrence Minden.

Ga., Newnan—Potato Curing.—Coweta Cotton Oil Co., H. C. Glover, Prest., plans to erect sweet-potato curing and storage-house.

Ky., Louisville—Advertising.—Goodwin, Camper & Kleesattel, capital \$10,000, inceptd. by O'Neill Goodwin, Fred. O. Kleesattel, D. S. Camper.

Ky., Madisonville—Construction.—Ruddell Construction Co., capital \$20,000, inceptd. by H. H. Ruddell, J. E. Mullennix, Claude Bass.

Md., Baltimore—Florist.—John Simon Bros., 1636 Eastern Ave., capital \$25,000, inceptd. by John, Walter and Louis Simon.

Md., Baltimore—Multigraphing, etc.—Anderson Publicity Co., 8 E. Lexington St., capital \$10,000, inceptd. by Conrad Sweare, Henry S. Barrett, Harrison W. Wagner.

Md., Hagerstown—Hardware, etc.—Baechtel Co., First National Bank Bldg., capital \$200,000, inceptd. by W. Murray, Charles W. Jr., and Myrtle L. Baechtel.

Miss., Pascagoula—Wharf.—Voted \$15,000 bonds for wharf construction and equipment. Address The Mayor. (Lately noted to vote.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Mo., Springfield—Hatchery.—United States Fish Hatchery, Fred J. Foster, Supt., will expend \$55,000 on State fish hatchery at Se-quiota Park; construct artificial lakes, etc.; A. G. Ball, Park Supt.

N. C., Asheville—Construction.—Fonda Construction Co., capital \$300,000, incptd. by E. A. Fonda, George R. Tennent.

N. C., Mt. Airey—Laundry.—Granite City Laundry Co., M. K. Pleasants in charge, will erect steam laundry; install mech.; purchased.

N. C., Charlotte—Greenhouses.—Louis G. Ratcliff will expend from \$75,000 to \$100,000 in erecting series of 4 steel and glass frames covering 50,000-ft. space; second building under construction; two others to be erected; sizes 300x35 ft. and one 300x45 ft.

S. C., Bishopville—Publishing.—Bishopville Publishing Co., capital \$10,000, incptd. with W. A. Stuckey, Prest.; A. W. Woodward, V.P.; W. J. Stricklin, Secy.-Treas.

S. C., Florence—Laundry.—Florence Steam Laundry, P. B. Harrah, Prop.; remodel plant, install machinery; all purchased.

S. C., Greenville—Advertising.—Ory M. Berman, capital \$20,000, incptd. by Ory M. and Edw. Berman, M. J. Peden.

S. C., Pageland—Hardware.—Farmers' Hardware Co., capital \$5000, incptd. with J. C. Mangum, Prest.; J. A. Turner, V.P.; G. C. Mangum, Secy.-Treas.

Tenn., Memphis—Industrial Engineers.—M. P. Burt & Co. organized by M. P. Burt, J. Paul Gaines, Louis G. Carlisle; specializing in packing and cold-storage designing, etc.

Okl., Tulsa—Building.—Castle Building Corp., capital \$200,000, incptd. by Henry, Kathleen and Nettie F. Castle.

S. C., Columbia—Printing.—R. L. Bryan Co. will erect 2-story 90x18-ft. brick printing plant; heavy slow-burning mill construction; bids until Mch. 14; Chas. C. Wilson, Archt., 805 Palmetto Bldg.

Tenn., Nashville—Dairy.—Anthony Pure Milk Co., reorganized by O. E. Davis, G. R. Anthony, W. M. Carr; changed name from East Nashville Milk Co.

Tex., Breckenridge—Printing.—Daily American will probably rebuild burned office building.

Tex., Dallas—Cleaning and Pressing.—Casino Cleaning & Pressing Co., T. E. Millholland and K. Bertucci, Proprs., have leased additional 28-ft. space; remodel plant; increase capacity.

Tex., Dallas—Construction.—Dallas Home Building Co., capital \$10,000, incptd. by J. H. Burt, J. R. and C. L. Clem.

Tex., Dallas—Laundry.—W. C. Frost will erect 1-story brick laundry costing \$1500.

Tex., Dalhart—Publishing.—Dalhart Texan Publishing Co. organized with C. Braley, Prest.; Marcella Walker, V.P.; C. H. Walker, Secy.-Treas. and Mgr. (Lately noted incptd.)

Tex., Dallas—Decorating.—S. W. Hudlow Decorating Co. increased capital from \$20,000 to \$40,000.

Tex., Eagle Pass—Hardware.—Garza Hardware Co. increased capital from \$25,000 to \$32,000.

Tex., Dallas—Electric Appliance.—Electric Appliance Co. increased capital from \$10,000 to \$200,000.

Tex., Fort Worth—Laundry.—Service Cleaning & Family Wash Co., organized with John Phillips, Prest.-Mgr.; A. Foute, Secy.; Geo. H. Mulkey, Treas.; has buildings and meny installed. (Lately noted incptd., capital \$10,000.)

Tex., Galveston—Steamship Line.—Steele Steamship Line, capital \$100,000, incptd. by J. H. W. and Semmes Steele, G. L. H. Koehler.

Tex., Houston—Plumbing.—Barber Plumbing Co. increased capital from \$10,000 to \$30,000.

Tex., Houston—Advertising.—Rogers & Gano, capital \$20,000, incptd. by C. S. Johnson, W. L. Childs, R. C. Kuldell.

Tex., Sweetwater—Plumbing.—J. C. Weaver will probably rebuild burned plant.

Tex., Waco—Printing.—J. M. Pittillo, Editor of Farm and Labor Journal, interested in establishing State printing plant.

Va., Bedford—Construction.—R. O. Lindsay and others contemplate organizing building company to erect dwellings of frame, brick, stone, etc. (See Machinery Wanted—Building Materials.)

Va., Norfolk—Dredging.—Fred. E. Jones Dredging Co., capital \$250,000, incptd. by Fred. E. Jones, Neil S. Stewart, Edward R. Baird, Jr.

Va., Petersburg—Hardware.—T. J. Moore Hardware Co. will probably rebuild burned building.

Va., Victoria—Concrete Construction.—National Concrete Construction Co., capital \$50,000, incptd. with A. M. Whitley, Prest., Williamson, N. C.

W. Va., Huntington—Construction.—Huntington Housing Corp., capital \$200,000, incptd. by D. J. and Paul C. Pancake, both Huntington; William Pyles, Ronceverte, W. Va.

W. Va., Morgantown—Printing.—Monongahela Valley Printing Co., capital \$25,000, incptd. by Hood Tibbs, M. F. Connell, G. L. Rodger.

W. Va., Wheeling—Fire Equipment.—Contemplate installing fire equipment. Address The City Mgr.

W. Va., Williamson—Engineering and Contracting.—Meiring, Hicks & Co., First National Bank Bldg., organized with W. P. Meiring, Prest.-Mgr.; E. W. Klump, V.-P. and Consol. Engr.; H. T. Hicks, Secy.-Treas.; specialize in engineering, design and construction of mining plants and installing machinery. (Lately noted incptd., capital \$75,000.)

Miscellaneous Factories.

Ark., Fort Smith—Coffee.—Border City Coffee Co. organized with Mr. Fellinger, Mgr.; purchased Wide-Awake Coffee Co.'s plant.

Ark., Sand Springs—Tannery.—Oklahoma Tanning & Mfg. Co., Uley Holderman, Prest.; acquired site with 2 buildings; will remodel for tannery; plans ultimate daily capacity 5000 hides.

Fla., Tampa—Cigars.—El Mori Cigar Co., capital \$10,000, incptd. with Sigmund Simon, Prest.-Treas.; B. F. Borchardt, Secy.

Fla., West Palm Beach—Glass.—W. G. Carroll, Box 611, contemplates establishing glass plant. (See Machinery Wanted—Glass Plant.)

Ga., Atlanta—Drug Specialties.—Drug Specialties Co., 23 Peters St., organized with J. L. Courtney, Prest.-Mgr. (Lately noted incptd., capital \$7500.)

Ga., Atlanta—Soda Water, etc.—E. J. Nunn & Co., capital \$15,000, incptd. by E. J. Nunn and T. F. Johnson.

Ga., Atlanta—Ginger Ale.—Hagan & Dodd will erect bottling plant unit; cost \$20,000.

Ga., Atlanta—Coca-Cola.—Coca-Cola Co. for France, capital \$25,000, incptd. by Chas. H. Candler, Atlanta; W. C. Bradley, Columbus, Ga.; E. W. Stetson, New York.

Ga., Savannah—Paint Products.—Southern Cotton Oil Trading Co. will erect plant to mfre. paint products; install machinery; total cost \$300,000.

Ky., Paducah—Buttons.—McKee & Blevin Button Mfg. Co., A. S. McKee, Representative,

Muscatine, Iowa, will establish plant to mfre. pearl buttons.

Ky., Providence—Tobacco.—Imperial Tobacco Co. will rebuild plant burned at loss of \$30,000.

La., Fairbanks—Carbon.—Darco Corp. is being organized with \$3,000,000 capital to mfre. decolorizing carbons from lignite, to be used in the process of refining sugar; plans erecting initial factory with daily capacity of 20 tons; expect \$1,000,000.

La., Bastrop—Pulp, etc.—Bastrop Pulp & Paper Co. will establish \$75,000 plant; erect building; install mech. to mfre. pulp; later will install paper-making mech.

La., Braithwaite.—Braithwaite Paper Mill will rebuild plant burned at loss of \$75,000.

La., Monroe—Ice Cream.—Watson & Aven Ice Cream Co. will improve plant.

La., New Orleans—Creamery.—Shafer Creamery Co. will establish plant.

Md., Baltimore—Candy, etc.—A. Holt, 6 W. North Ave., capital \$50,000, incptd. by Alex Holt, J. Leroy Chase and Wm. D. Macmillan.

Md., Baltimore—Bottling.—Julio Bottling Co., Louis Miller, North Ave. and Sherwood St., will erect 1-story 60x30-ft. factory building; brick; Geo. R. Callis, Jr., Archt.. American Bldg. (Lately noted incptd., capital \$25,000.)

Md., Baltimore—Varnishes, etc.—Elkay Corp. Hollins and McPhall Sts., will establish plant to mfre. wood stains, varnishes, etc.; leased building; install \$3000 machinery.

Mo., Moerly—Shoes.—Pedigo-Weber Shoe Co., St. Louis, Mo., plans establishing branch factory.

N. C., Burlington—Neckwear.—Gar White Neckwear Co., R. H. Whitehead and F. E. Garner, partners, will rent building; install mech.; mfre. men's neckwear.

N. C., Greensboro—Leather Belts, etc.—McLeod Leather & Belting Co., capital \$200,000, incptd. by E. D. Broadhurst, Greensboro; W. T. McLeod and J. A. Schachner; both Charlotte, N. C.

N. C., Kinston—Ice cream.—H. C. Hines will erect 2-story 105x30-ft. ice cream plant; brick and reinforced concrete; 3 40-qt. freezer capacity; cost \$50,000. (Lately noted contemplated.)

N. C., Kinston—Ice Cream.—H. C. Hines will erect 2-story ice-cream plant; cost \$50,000.

N. C., Winston-Salem—Tobacco.—Bailey Bros., F. R. Bailey, let contract to Fogle Bros. Co. to erect plant addition; 1 story; 50x50 ft.; brick mill construction; gravel roofing.

N. C., Winston-Salem—Ice Cream.—Peerless Ice Cream Co., Will Chambers, South Main St., will erect plant addition.

Ola., Enid—Batteries.—University Battery & Electric Co., capital \$100,000, incptd. by G. E. Darland, C. P. Harris and I. F. Conkling.

Ola., Headlton—Clothing.—Majestic Clothing Co., capital \$20,000, incptd. by C. L. Diddens, O. G. McCarroll and J. A. McKnight.

Ola., Lawton—Wax Plant.—Damascus Refining Co., W. G. Black, Prest., Cleveland, O., contemplates construction wax plant to mfre. lubricating oils.

S. C., Charleston—Paints.—Atlantic Paint Co. increases capital from \$20,000 to \$75,000.

Tenn., Memphis—Lard Refinery.—Memphis Packing Corp., Jos. Newburger, Prest., will erect lard refinery.

Tenn., Memphis—Soap.—Memphis Packing Corp., Jos. Newburger, Prest., contemplates erection plant to mfre. soap.

Tex., Abilene—Candy.—Abilene Candy Mfg.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Co., capital \$10,000, inceptd. by G. C. Helvey, G. W. Beard and D. B. Morgan.

Tex., Beaumont—Trunks, etc.—Kidd-Russ Trunk & Bag Co. increases capital from \$10,000 to \$20,000.

Tex., Coleman—Lamps.—Coleman Lamp Co. increases capital from \$10,000 to \$50,000.

Tex., Corpus Christi—Ice Cream.—Cloverdale Ice Cream Co., H. A. Brunson, will erect factory building; purchased mech., will install; mfrs. ice cream.

Tex., Dallas.—Lone Star Mfg. Co., capital \$105,000, inceptd. by M. Agress, A. S. Bain and L. Sulsky.

Tex., El Paso—Candy.—Buff Candy Co., capital \$25,000, inceptd. by C. M. Buffington, C. H. Ekkford and C. R. Loomis.

Tex., Houston—Trunks.—Houston Trunk Factory increases capital from \$20,000 to \$40,000.

Tex., Houston—Ink.—Southern Ink Mfg. Co., capital \$25,000, inceptd. by R. T. McDonald, J. C. Lemons and J. C. Kegans.

Tex., Sabinal—Creamery.—Sabinal Creamery, B. A. Riddle, owner, will probably rebuild creamery burned at loss of \$5000 to \$6000.

Tex., Sherman—Ice Cream.—Jensen-Eckel Ice Cream Co.; leased building; will remodel; install \$50,000 machinery.

Tex., Taylor—Bottling.—H. Pickoff & Co. will construct plant addition; install mech.; total cost \$10,000.

Va., Bristol—Lamp Shades, etc.—Orient Studios, capital \$50,000, inceptd. with J. Gutman, Prest., Bristol, Va.; J. Frank, Secy., Bristol, Tenn.

Va., Norfolk—Drugs.—Pontifex Drug Corp. inceptd. with J. P. M. Joyce, Prest.; W. A. Waterfield, Contrs., 106 W. Madison St.

Md., Baltimore—Automobile Supplies.—Standard Oil Co., Pier 2, Pratt and Commerce Sts., will remodel building for automobile-supply station and office; \$17,500.

Md., Salisbury—Automobiles.—Lloyd A. Richardson Motor Co. has under construction 3-story automobile building; terra-cotta front; dimensions of ground floor 105x30 ft.; cement floor, showroom and office; second and third floors 75x30 ft., with maple floors and plastering of sand finish; third story floor space 2200 ft.

N. C., Charlotte—Trucks.—Republic Truck Co. will erect \$60,000 building; 1 story, 87x93 ft.; R. L. Goode, Contr.; L. L. Hunter, Archt.

N. C., Greenville—Automobile Accessories.—Greenville Storage Battery Co., organized with W. G. Downing, Prest.; W. T. Bryan, V.-P. and Mgr.; J. Knott Proctor, Secy.-Treas.; has fireproof building; daily output distributors, rubber-thread batteries, tires and tubes, etc. (Lately noted inceptd., capital \$50,000.)

S. C., Columbia—Automobiles.—Gleam Automobile Co., capital \$25,000, inceptd. with L. E. Glenn, W. A. Glenn, W. L. Glenn.

Tex., El Paso—Motors.—Baulin Motor Co., capital \$25,000, inceptd. with A. H. Brittain, C. B. Paulin, Carrie Flinlay.

Tex., El Paso—Motors.—El Paso Motor Co. and Buquor Motor Co. will probably rebuild burned building; loss \$100,000.

Tex., Fort Worth—Garage.—Texas Paige Motor Car Assn., 1st and Throckmorton Sts., will probably rebuild burned garage; loss \$10,000.

Va., Richmond—Accessories.—W. M. Reynolds, Inc., increases capital from \$25,000 to \$100,000.

Va., Richmond—Garage.—Martinsburg Sales Corp., capital \$75,000, organized with Lucy D. Kirkmyer, Prest.; Jas. A. Kirkmyer, Secy.

W. Va., Bluefield—Automobiles.—Mountain Motor Corp., 43 Princeton Ave., consolidation of Mountain Motor Corp. and Dixie Motor Co., increased capital to \$100,000.

W. Va., Dunbar—Motor Tractors.—Auto-Mfg. Co. will erect additions and install new machinery.

Fla., Orlando—Service Station.—Battery Service Co., capital \$15,000, organized with F. J. Schiff, Prest.; G. R. Johnson, V.-P.; T. L. Casey, Secy.-Treas.

Fla., Orlando—Automobile Supplies.—Schiff Automobile Supply Co., capital \$15,000, organized with F. J. Schiff, Prest.; G. R. Johnson, V.-P.; Saml. Blumberg, Secy.-Treas.

Ky., Owensboro—Service Station.—Standard Oil Co. has started construction on \$10,000 service station; brick veneer; J. A. Gardner, Contr.; D. J. Willett, Supt. of Construction; both Louisville, Ky.

La., New Orleans—Service Station.—Crescent Battery Mfg. Co., 113 Howard St., will probably rebuild burned service station; loss \$15,000.

Md., Baltimore—Taxicabs.—Yellow Taxicab Co., 1231 Calvert Bldg., capital 500 shares, inceptd. with Stuart Kearney, John S. Caffee, Carl F. Murbach.

Md., Baltimore—Garage.—Waldorf Development Co., Reisterstown Rd., will erect garage; 1 story; \$15,000.

Md., Baltimore—Garage.—Will erect 1-story brick garage and 1-story blacksmith shop; 100x10x30 ft. and 57x30 ft.; \$11,000; Hicks, Tase & Norris, Contrs., 106 W. Madison St.

Md., Baltimore—Automobile Supplies.—Standard Oil Co., Pier 2, Pratt and Commerce Sts., will remodel building for automobile-supply station and office; \$17,500.

Ark., Marion.—Will surface 8.5 mi. Road Improvement Dist. 9, 18-ft. wide; bids until Mch. 29; Morgan Engineering Co., Engr., Goodwyn Institute, Memphis, Tenn.

Ark., Marion.—Will construct 23 mi. gravel roads; bids until Mch. 15. Address Critterden County Comrns. Road Improvement Dists. 7 and 9. (See Machinery Wanted—Road Construction.)

Fla., Bronson.—Will construct 20 mi. limestone road; \$75,000 to \$80,000. Address Levy County Comrns.

Fla., Jacksonville.—Will pave Perry St.; 498 sq. yds. asphalt block pavement, 2½ in. thick, on sand base, with granite curb; bids until Mch. 18; John S. Bond, Chrnn., City Comrns. (See Machinery Wanted—Paving.)

Fla., Lake Worth.—Will construct sidewalks; F. M. Houghton, Town Clk.

Fla., Miami.—Will construct 1 mi. sidewalks; \$15,000; bids opened; R. M. Davidson, City Engr.

Fla., Okeechobee.—Will construct 18 mi. State Road No. 107 between Kissimmee River and St. Lucie County line; bids until Feb. 28; W. W. Potter, Chrnn., Okeechobee County Comrns. (See Machinery Wanted—Road Construction.)

Fla., Plant City.—Will pave S. Drane St.; asphalt blocks, granite curbing; \$70,000 available; J. J. Hedrick, Jr., Engr., Tampa, Fla. (Lately noted)

Ga., Athens.—Will construct 2.7 mi. Federal Aid Project 179; State Aid Project S-8-3; bids until Mch. 2; R. T. Goodwin, Jr., Div. Engr.

Ga., Lyons.—Will pave State highway from Montgomery County line to Lyons; later will pave through county from Lyons to Tattnall County line, between Lyons and Reidsville. Address Toombs County Comrns.

Ga., Moultrie.—Will pave several thousands yds. Moultrie-Funston road; bids until Mch. 4. Address Colquitt County Comrns.

Ga., Savannah.—Will pave Jones St., Louisville, Ogeechee Rds., Lathrop Ave., Bull, Henry Sts. and other avenues; 51,558 sq. yds.; bids until Mch. 9; J. W. Motte, Director Public Works. (See Machinery Wanted—Paving.)

Ky., Catlettsburg.—Will complete 7 mi. Mayo trail, 7-mi. road from Laurel to Lawrence county line, etc.; vote on \$500,000 bonds. Address Boyd County Court.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ky., Louisville.—Bardstown Road Welfare Assn., capital \$25,000, inceptd. with A. B. Gwin, Thomas H. Boden, Henry C. Yunker.

Ky., Madisonville.—Will construct 16,966 sq. yds. Kentucky rock asphalt pavement with macadam base; bids until Mch. 5; D. W. Gatlin, Mayor. (See Machinery Wanted—Paving.)

Ky., Whitesburg.—Will construct 3 mi. highway between Ermie and Mayking; will let contract. Address Letcher County Commsr.

La., Alexandria.—Will grade 9 mi. Glenmoraine-Westport Rd.; bids until Mch. 8; changed date from Feb. 8; J. F. Ball, Prest. Rapides Parish Police Jury; Ira W. Sylvester, Parish Engr. (See Machinery Wanted—Road Construction.)

La., Covington.—Will construct 15 mi. road to connect Slidell with New Orleans highway; erect bridges; voted \$250,000 bonds. Address St. Tammany Parish Police Jury. (Lately noted to vote.)

La., New Orleans.—Let contract to M. Flynn, 823 Maison Blanche Bldg. for paving Tchoupitoulas St.; 23,000 sq. yds. 4-in. creosoted paving blocks.

Miss., Laurel.—Will construct road beginning at Laurel-Soso Rd. and road at Carroway Pl. Address Jones County Supvrs.

La., LeCompte.—Will construct 18,310 sq. ft. sidewalks; 1020 lin. ft. combined curb and gutter on 5 streets; separate bids on each street; bids about Mch. 15; J. L. White, Engr. (See Machinery Wanted—Paving.)

Md., Denton.—Will construct 2.55 mi. State Highway from Grove to Fowling Creek; concrete; Caroline County, Contract CO-24; bids until Mch. 15; J. N. Mackall, Chrmn. State Roads Comsnn., 601 Garrett Bldg., Baltimore. (See Machinery Wanted—Road Construction.)

Md., Salisbury.—Will construct 1.50 mi. State Highway from State road near Willards toward Powellsly; concrete; Wicomico County, Contract WI-16; bids until Mch. 15; J. N. Mackall, Chrmn. State Roads Comsnn., 601 Garrett Bldg., Baltimore. (See Machinery Wanted—Road Construction.)

Md., Upper Marlboro.—Will construct 2 mi. State Highway from end of Contract P-16A toward Lanham; concrete; Prince George's County, Contract P-22; 2 mi. State Highway from end Contract P-17 along Central Ave. toward Halls Station; Prince George's County, Contract P-23; bids until Mch. 15; J. N. Mackall, Chrmn. State Roads Comsnn., 601 Garrett Bldg., Baltimore. (See Machinery Wanted—Road Construction.)

Miss., Indianola.—Will construct 17½ mi. roads in Sunflower County; may let contract; Jno. M. Herbert Engineering Co., Engr. Address Sunflower County Highway Commsr. Dist. No. 1.

Miss., Meridian.—Will repair streets; received bids from Dunn Construction Co., Birmingham, Ala.; Richardson & Pinkston, Meridian, and others; W. H. White, City Clk.; John C. Watts, City Engr. (Lately noted in-viting bids.)

Miss., Pascagoula.—Will pave streets; voted \$20,000 bonds. Address The Mayor.

Miss., Pontotoc.—Will construct portion of Bankhead Highway across Pontotoc County, from Lee to Lafayette County line; concrete; \$225,000 available. Address Pontotoc County Supvrs.

Miss., Vicksburg.—Will construct gravel or other hard-surfaced roads; issue \$30,100 bonds. Address Warren County Highway Comsnn.

Mo., Caruthersville.—Let contract to J. M. Elvaine and C. R. Pierce for building 5.93 mi. Kings highway, Hayti Special Dist.; Federal

Aid Project 35, Pemiscot County. Address State Highway Dept., Jefferson City, Mo. (Previously noted inviting bids.)

Mo., Huntsville.—Will construct roads; \$500,000 available; bids until Mch. 10; Fuller & Beard, Engrs. St. Louis, Mo. Lately noted. (See Machinery Wanted—Road Construction.)

Mo., Cape Girardeau.—Will pave Main, Broadway and other streets; \$60,000; bids in Mch.; E. L. Sailer, City Engr. Previously noted. (See Machinery Wanted—Paving.)

Mo., Clayton.—Will construct 8½ mi. Le May Ferry road, 18-ft. wide; \$7,000 sq. yds. concrete; W. E. Elbring, County Engr.

Mo., Hartville.—Will construct 7.46 mi. State road, Project No. 20.26, including grading and constructing culverts and wooden guard rail, etc.; \$33,698.60; bids until Mch. 18; Alexander W. Graham, State Highway Engr., Jefferson City, Mo. Lately noted. (See Machinery Wanted—Road Construction.)

Mo., Kansas City.—Let contract for paving Main St. from 33d to 39th Sts.; 3-in. vitrified brick on 8-in. concrete base; \$90,925.76; D. T. Brosnan, Contr. Address Board Public Works. (Lately noted.)

Mo., Mount Vernon.—Will construct 10.43 mi. Springfield-Monett road, Federal Aid Project 42, Lawrence County; bids until Mch. 4. Address State Highway Dept., Jefferson City, Mo.

Mo., Springfield.—Will construct State Road Project 162, including grading, constructing culverts and gravel pavement 16 ft. wide, on State road from Christian County line; \$47,271.92; bids until Mch. 7; Fred. W. Johnson, Engr.; H. P. Mohrly, Div. Engr., Woodruff Bldg. (See Machinery Wanted—Road Construction.)

Mo., St. Louis.—Will repair 587 ft. Harney St., brick; \$13,500; 135-ft. 17th St., wood block; 269 ft. Washington Ave., wood block, etc.; about \$47,750; bids about April 15; W. W. Horner, City Engr.

Mo., Stockton.—Will construct 7.42 mi. State road, Project 88, Section A, including grading and constructing culverts and wooden rail; \$19,527.01; 9.73 mi. State road, Project 47, Section A, including grading, constructing culverts, bridges, etc.; \$39,650.24; bids until Mch. 17; Alexander W. Graham, State Highway Engr., Jefferson City, Mo. (See Machinery Wanted—Road Construction.)

Mo., West Plains.—Will improve West Plains and Siloam Springs, West Plains-Bakersfield and other roads; \$181,271 available; Elston, Axon & Russell, Consult. Engrs., Springfield, Mo.

N. C., Charlotte.—Will construct roads; vote on \$2,000,000 bonds. Address Mecklenburg County Commsr.

N. C., Currituck.—Will construct road; bids opened; W. S. Falls, State Highway Engr., Raleigh, N. C.

N. C., Dobson.—Will complete and construct 30 mi. additional roads; introduced bill in Legislature providing for issuance of \$150,000 bonds. Address Surry County Highway Comsnn.

N. C., Durham.—Will construct South Boulevard, Sections 1 and 2, connecting New Hope Valley Rd. and Baxter St. and Chapel Hill Rd. and New Hope Valley Rd.; 85 mi.; bids until Mch. 8; F. E. Schneppel, County Engr. (See Machinery Wanted—Road Construction.)

N. C., Durham.—Will construct \$900 to 15,000 sq. yds. concrete sidewalk; bids until Mch. 8; M. E. Newsom, Mayor. (See Machinery Wanted—Paving.)

N. C., Hertford.—Let contract to F. J.

McGuire, Norfolk, Va., for constructing 15 mi. 9-ft. roadway, with 5-in. concrete base and 2-in. topcoat sheet asphalt; sold \$300,000 bonds. W. C. Morgan, Chrmn. Perquimans County Commsr.

N. C., Hertford.—Let contract to F. J. McGuire, Norfolk, Va., to pave streets; B. G. Koonce, City Clk., Hertford; J. B. McCrary Engineering Corp., Engr., Atlanta, Ga. (Lately noted inviting bids.)

N. C., Hickory.—Will construct 40,000 yds. paving and sidewalks; \$175,000 available; bids until Mch. 29; Taplin & Perkins, Engrs., High Point, N. C.; R. G. Henry, City Mgr. Lately noted. (See Machinery Wanted—Paving.)

N. C., Jefferson.—Will construct highway at or near River Bridge on Jefferson-Wilksboro highway to Laurel Springs; 8 mi.; bids until Mch. 8; J. F. Scott, Chrmn. Ashe County Board Good Roads Commsr.; J. G. Bright, County Engr. (See Machinery Wanted—Road Construction.)

N. C., Nashville—Road and Bridge.—Will receive bids until Mch. 7 on \$210,000 of 6 percent semi-annual \$1000 denomination bonds, dated Mch. 1, 1921; J. B. Boddie, Clk. Nash County Commsr.

N. C., Newton.—Will construct sand-clay roads; issue \$500,000 bonds. Address Catawba County Court.

N. C., Pittsboro.—Will construct county highway from Cape Fear Township line at Beaver Creek Station; bids until Mch. 16; W. T. Ward, Chrmn. Chatham County Commissioners. (See Machinery Wanted — Road Construction.)

N. C., Smithfield.—Will grade, drain and surface roads; D. B. Olliver, Chrmn. Johnston County Commsr.

Okl., Altus.—Will construct 1 mi. cement concrete, Topeka top on concrete base or other pavement; Federal-aid Project No. 41, Jackson County; \$50,000; bids until Mch. 1; Robert C. Terrell, State Engr.; Henry Wood, Commr. Highways; both Oklahoma City. Lately noted. (See Machinery Wanted—Road Construction.)

Okl., Ardmore.—Let contract for 16 mi. gravel road in Carter County at \$340,000 to Maney Bros., Oklahoma City. Address State Highway Dept., Robert C. Terrell, Engr., Oklahoma City. (Lately noted opening bids.)

Okl., Okmulgee.—Will pave streets; 3 to 4 mi.; \$250,000. Address The Mayor.

Okl., Dewey.—Will grade and pave 15 blocks street; 24 and 30-ft. wide; 16,130 sq. yds. concrete; 10,300 lin. ft. curbing; bids in spring; Wood & Witten, Engrs., Tulsa, Okla.

Okl., Durant.—Will construct 15 mi. gravel or water-bound macadam road; Federal-aid Project No. 5; \$200,000; 65.42 mi. gravel or water-bound macadam road divided into 1 sections, and bids received on each separately; Federal-aid Project No. 41, Bryan County; \$1,000,000; bids until Mch. 1; Henry Wood, Commr. Highways; Robert C. Terrell, State Engr.; both Oklahoma City, Okla. (Lately noted. (See Machinery Wanted—Road Construction.)

Okl., Holdenville.—Will improve roads; may vote on \$100,000 bonds. Address Hughes County Commsr.

Okl., Pawhuska.—Will construct 7.19 mi. concrete, Topeka top on concrete base or other pavement; Federal-aid Project No. 42, Osage County; \$250,000; bids until Mch. 12; Henry Wood, Commr. Highways; Robert C. Terrell, State Engr.; both Oklahoma City, Okla. Lately noted. (See Machinery Wanted—Road Construction.)

Okl., Red Fork.—Will pave streets and sidewalks. Address The Mayor.

March 3, 1921.

MANUFACTURERS RECORD.

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Okl., Tishomingo.—Will construct 35.57 mi. gravel or water-bound macadam road divided into 4 sections, and bids received on each separately; Federal-aid Project No. 47, Johnson County; \$500,000; bids until Mch. 1; Robert C. Terrell, State Engr.; Henry Wood, Commr. Highways; both Oklahoma City, Okla. Lately noted. (See Machinery Wanted—Road Construction.)

Okl., Walters.—Let contract to Wichita Falls Paving Co., Wichita Falls, Tex., for paving 93,000 sq. yds. paving; \$520,000 available; E. H. Hackenberg, Engr., Walters, Okla.; W. B. Anthony, City Mgr. (Lately noted.)

Okl., Weleetka.—Will pave streets; 8300 yds. brick pavement; \$51,000 available; bids until Mch. 16; V. V. Long & Co., Engrs., 1300 Colcord Bldg., Oklahoma City; L. T. Newlon, City Clk. Supersedes recent item. (See Machinery Wanted—Paving.)

S. C., Chester.—Will construct roads; issue \$60,000 bonds. Address Chester County Commissioners.

S. C., Laurens.—May topsoil Piedmont highway; 3 mi. Address Laurens County Court.

S. C., McCormick.—Will construct roadway to Fury's Ferry. Address McCormick County Commsrs.

S. C., St. Matthews.—Will construct 67 mi. road, asphaltic concrete; J. R. Pennell, Engr., Columbia, S. C.

Tenn., Clarksville.—Will grade and pave streets with asphaltic concrete; 50,000 sq. yds. pavement; 8000 ft. concrete curb and gutter; 900 ft. sewers and drains; bids until Mch. 1; W. E. Beach, Mayor; S. R. Alexander, City Engr. (See Machinery Wanted—Paving.)

Tenn., Cleveland.—Will pave 3 mi. streets; \$30,000 available; bids in March; S. D. Newton, Engr. Lately noted issuing bonds. (See Machinery Wanted—Paving.)

Tenn., Henderson.—Will issue \$90,000 road bonds for road construction; C. L. Parrish, Chester County Clk.

Tenn., Trenton.—Let contract for working roads of Gibson County; R. K. Taylor, Gibson County, Judge.

Tex., Austin.—Will vote Mch. 26 on \$35,000 bonds for road improvements; G. S. Matthews, Travis County Judge.

Tex., Columbus.—Let contract to Harris & Powell, Tyler, Tex., at \$38,669.99 for constructing 3.79 mi. gravel surfaced Borden-Glidden road on Highway No. 3 in Colorado County; J. C. Hoyo, Colorado, County Judge; B. H. Barber, County Engr. (Lately noted inviting bids.)

Tex., Denison.—Will construct 40,000 sq. yds. concrete pavement, etc.; bids opened Feb. 28; J. L. Short, City Secy. (See Machinery Wanted—Paving.)

Tex., Fort Worth.—Will repair 4½ mi. Nine Mile Bridge road; surface with gravel; \$5000; John W. Roberts, Tarrant County Commr.

Tex., Fort Worth.—Will pave portions of 21 streets; brick, bitulithic, rock asphalt pavement; bids until Mch. 8; James Liston, City Secy.; D. L. Lewis, City Engr. (Lately noted voting bids.)

Tex., Franklin.—Let contract for graveling 8 mi. road from Bremond Precinct line through Franklin and Wheelock; sold \$35,000 bonds. This road has already been graded and bridges been built. Address Robertson County Commsrs. (Previously noted voting bonds.)

Tex., Groveton.—Let contract to Cochran & Lilly, Cold Springs, Tex., for 50 mi. sand-lay roads; Fred J. Berry, County Judge; W. J. Kelly, County Engr. (Lately noted inviting bids.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex., Haskell.—Will construct 15,000 sq. yds. street pavement; 1600 lin. ft. combination curb and gutter; 26,000 sq. ft. sidewalk, etc.; bids until Mch. 3; Marvin Post, City Secy.; R. G. Carraway Co., Engr., Childress, Tex. (See Machinery Wanted—Paving.)

Tex., Henderson.—Will improve sections A, B and C, State Highways 26 and 43; Federal Aid Project 201; bids about Mch. 15; changed date from Feb. 24; Hess & Skinner, Engrs., Southwestern Life Bldg., Dallas, Tex.

Tex., Houston.—Will repair Clinton Rd.; will invite bids; will invite new bids for scarifying 1 mi. Houston Ave. Address Harris County Commsrs.

Tex., Kaufman.—Let contracts for gravel roads as follows: Smith Bros., Dallas, Tex., for 25.2 mi. State Highway No. 40 at \$126,150; Healy Construction Co., Sumpter Bldg., Dallas, for 60.2 mi. gravelled county roads at \$367,610; Bartlett & Ranney, County Engrs. (Lately noted.)

Tex., Kingsville.—Let road contract as follows: Tex., \$47,823.18, grade and surface 11.6 mi. Highway No. 12 from Rivera to Brooks County line, caliche; A. C. Buchanan & Son, Temple, Tex., \$17,201.21, drainage structures; W. T. Montgomery, San Antonio, Tex., \$112,860, surface 18.6 mi. Highway No. 12; J. F. Wilson, Kleberg County Judge; H. C. Porter, County Engr. (Lately noted inviting bids.)

Tex., Liberty.—Will construct 200 mi. highway; vote on \$525,000 bonds in Precincts 1 and 2. Address Liberty County Commsrs.

Tex., Marlin.—Will improve 46 mi. road in Precinct No. 1; bids until Mch. 10; John Sutherland, County Auditor and Secy. Permanent Road Board, Justice Precinct No. 1. Supersedes recent item. (See Machinery Wanted—Road Construction.)

Tex., Paducah.—Will construct 18.25 mi. sand-clay road on State Highway No. 4 in Cottle County; low bidder McLaughlin & Douglas, Spur, Tex., at \$64,676.92; W. J. Arlington, County Judge, Paducah; C. L. Hasie Engineering Co., County Engr. (Lately noted inviting bids.)

Tex., Pecos.—Will construct roads in Toyah Dist., vote Mch. 8 on \$40,000 bonds; also plan hard-surfaced road on 40-mi. Bankhead highway; voted \$30,000 bonds in Balmorhea Dist., for hard-surfaced road from Saragosa to Head Spring. Address Reeves County Commsrs. (Lately noted.)

Tex., Pecos.—May pave streets; plan voting on \$100,000 bonds. Address The Mayor.

Tex., Quanah.—Will construct 14,300 sq. yds. paving 5600 lin. ft. combination curb and gutter; 1900 sq. ft. 6 in. concrete alley aprons, etc.; bids received Mch. 8 by City and Hardeman County; Henry Exall Elrod Co., Consit. Engr., Dallas, Tex. (See Machinery Wanted—Paving.)

Tex., Quitman.—Will surface 4 mi. State Highway No. 42 with gravel; B. F. Cathey, County Judge; V. Searey, County Engr.

Tex., Rockwall.—Let contract to Smith & Hill, Temple, Tex., at \$64,394.50 for constructing Rockwall-Chisholm road; W. K. Wells, County Judge; John A. Focht, County Engr. (Lately noted inviting bids.)

Tex., San Antonio — Road. — San Antonio Speedway Assn., capital \$150,000, Incptd. with Noah Smith, W. A. Smith, J. L. Clem, Jr.

Tex., Seguin.—Let contract to J. F. Hamer, Fort Worth, Tex., at \$51,557.93 for grading and surfacing 19.1 mi. State Highway No. 3 from Seguin to Bexar county line, gravel; J. B. Williams, Hess & Skinner, County Engrs., Dallas, Tex. (Lately noted inviting bids.)

Tex., Chatham.—Will construct 4.26 mi. bituminous macadam road on State Road No. 14 in Pittsylvania County, between Blairs and

White Oak Mountain; Virginia Project No. 86; bids until Mch. 15; G. P. Coleman, State Highway Commr., 116 S. 3d St., Richmond, Va. Lately noted rejecting bids. (See Machinery Wanted—Road Construction.)

Va., East Radford.—Will improve streets; vote on \$400,000 bonds; Wm. E. Gilbert, Mayor. (Supersedes recent item.)

Va., Rustburg.—Will construct 34.67 mi. soil roads; bids until Mch. 7; W. F. Day, County Engr., 704 Church St., Rustburg, and Lynchburg, Va. (Lately noted.)

Va., Portsmouth.—Will construct Portland Cement concrete roads on various streets or avenues in Ocean View, Tanners Creek Dist., Norfolk County; bids until Mch. 5; R. B. Preston, County Engr. (See Machinery Wanted—Road Construction.)

Va., Richmond.—Will widen and improve Bank St.; \$30,000 available; will invite bids. Address Director of Public Works.

Va., Richmond.—Will construct 1 mi. Three-Choop Rd., County Rd. No. 1, 2.62 mi. Broad Street Rd., County Rd. No. 3 and 1.46 mi. 2d Street Rd., County Rd. No. 14; bids until Mch. 1. Address Henrico County Supvrs. (See Machinery Wanted—Road Construction.)

Va., Salem.—Will construct 9.25 mi. bituminous macadam road on State Road No. 10 in Roanoke and Botetourt counties, between Roanoke and Blue Ridge Springs; Virginia Project No. 104; bids until Mch. 15; G. P. Coleman, State Highway Commr., 116 S. 3d St., Richmond, Va. (See Machinery Wanted—Road Construction.)

Va., Suffolk.—Will construct 7.42 mi. concrete road on State Road No. 10 in Nansemond and Norfolk counties, between Wilroys and Portsmouth; Virginia Project No. 64A; bids until Mch. 15; G. P. Coleman, State Highway Commr., 116 S. 3d St., Richmond, Va. Lately noted rejecting bids. (See Machinery Wanted—Road Construction.)

W. Va., Charleston.—Will grade road on north side Elk River; 2 mi.; bids until Mch. 15; S. E. Childress, Prest. Kanawha County Commsrs.; F. G. Burdette, County Road Engr.

W. Va., Charleston.—Will pave streets; \$35,000 sq. yds. paving; bids until Mch. 5; Ernest Bruce, City Engr. (See Machinery Wanted—Paving.)

W. Va., Clendenin.—Will pave streets; 6000 sq. yds. concrete pavement; bids until Mch. 15; D. H. Stephenson, Mayor. (See Machinery Wanted—Paving.)

W. Va., Lewisburg.—Will surface 13 mi. Blue Sulphur turnpike, Blue Sulphur Dist.; waterbound macadam on limestone base; bids about May 1; J. W. Rader Co., Engr.

W. Va., Martinsburg.—Will pave Burke, Martin, College, Raleigh and other streets; asphalt; bids until Mch. 30. Address The Mayor.

W. Va., Moundsville.—Will grade and drain 6 mi. roads in Meade Dist., 16 ft. wide; bids until Mch. 18; A. Purdy, County Engr.

W. Va., St. Albans.—Will pave streets; 19,700 sq. yds. monolithic, brick construction, concrete base paving; 9596 lin. ft. curb and gutter; bids until Mch. 24; L. A. Edwards, City Clk. (See Machinery Wanted—Paving.)

W. Va., Sutton.—Will grade and drain 4.64 mi. Class A road, Salt Lick Dist.; bids until Mch. 1; County Engr.

Sewer Construction.

Ala., Birmingham.—Plans construction 1 mi. sewers in 32d and 1st Aves. and Cedar and Pine Sts., Woodlawn; J. Kendrick, City Engr.

Ala., Tuscaloosa.—Will construct 9434.4 ft. sanitary sewers in 28th and 29th Sts., etc.; M. G. Kersh, City Clk.

D. C., Washington.—Will construct 22,000 ft. 6 to 15-in. sewers, with house connections, manholes, etc.; bids until Mch. 14; Washington Suburban Sanitary Comsn., Wm. T. S. Curtis, Evans Bldg., Washington; Robt. B. Morse, Ch. Engr., Armory Bldg., Hyattsville, Md. (See Machinery Wanted—Sewers.)

Fla., Pensacola.—Will relay sanitary sewers in De Villiers and Garden Sts.; constructing manholes, etc.; bids until Mch. 14; L. E. Heinberg, City Clk.; Frank Jarrett, City Engr. Lately noted. (See Machinery Wanted—Sewers.)

Md., Baltimore.—Will construct auxiliary pumping station No. 2 (Sanitary Contract No. 178) at Sewage Disposal Works, Back River; bids until Mch. 9; Mayor Wm. F. Broening, Prest. Board of Awards; A. E. Christliff, Highways Engr. (See Machinery Wanted—Sewer Pumping Station.)

Mo., Carthage.—Will install sewers in Dist. No. 4; bids until Apr. 1; Jas. Burk, City Clk.; Frank B. Newton, City Engr. (See Machinery Wanted—Sewers.)

Mo., St. Louis.—Will construct 5930 lin. ft. 12-36-in. vitrified sewer in Northwest Industrial Sewer Dist., cost \$29,500; 2835 lin. ft. 8-30-in. vitrified sewer in Rock Creek Sewer Dist., cost \$13,500; 3120 lin. ft. 12-51-in. segment block sewer in Harlem-Goodfellow Joint Sewer Dist., cost \$40,000; 875 ft. 12-in. sewer in Margaretta-Shreve Sewer Dist., cost \$2700; bids until Apr. 15; W. W. Horner, City Engr.

N. C., Durham.—Will construct 10,000 ft. 8-in. sanitary sewers and 9300 ft. 6-in. sewers; bids until Mch. 8; M. E. Newson, Mayor; H. W. Kueffner, City Engr. Lately noted. (See Machinery Wanted—Sewers.)

N. C., Graham.—Will construct 13.5 mi. 8 to 18-in. vitrified pipe, with manholes, flush tanks and appurtenances; also 2 sewage-pumping stations, with .6 mi. of 4 and 6-in. cast-iron pipe; bids until Mch. 30; R. L. Holmes, Mayor; Norcross & Keis, Engrs., 1625 Candler Bldg., Atlanta, Ga. (See Machinery Wanted—Sewers.)

Tenn., Clarksville.—Will construct 8000 ft. sewers and drains, 8-15-in. diam., and pave streets; bids until Mch. 24; W. E. Beach, Mayor; S. R. Alexander, City Engr. (See Machinery Wanted—Sewers.)

Tenn., Knoxville.—Will construct 8000 lin. ft. 15 to 24-in. sanitary sewer from Fifth Ave bridge to Oakwood; bids until Mch. 22; J. B. McCalla, Commr. Streets and Public Improvements. Lately noted to vote on bond issue. (See Machinery Wanted—Sewers.)

Tex., Chillicothe.—Let contract to N. C. Nichols Co., Wichita Falls, Tex., to extend water-works and construct sewer system.

Tex., Comanche.—Will vote Mch. 27 on \$20,000 bonds to enlarge sewer system. Address The Mayor.

Tex., El Paso.—Contemplates improving disposal plant; initial cost \$120,000. Address The Mayor.

Tex., Houston.—Plans construction sewers in Montrose Youkum Blvd.; cost \$50,000. Address The Mayor.

Tex., Houston.—Let contract to E. K. High to construct sewer on Travis St. from Lamar Ave. to Walker Ave.; cost \$12,500.

Shipbuilding Plants.

Tex., Houston—Ship Repairs.—B. H. Elliott, Inc., capital \$20,000, inceptd. by Don Hall, B. H. Elliott, W. P. Bulkley; build and repair boats, ships, etc.

Telephone Systems.

Md., Baltimore.—Police Comsn., Charles D. Gaither, Commr., contemplates equipping

marine division and the outlying stations of the department with radio-telephone.

Tex., Graham.—Graham Independent Telephone Co. increased capital from \$15,000 to \$50,000.

Va., Staunton.—Will erect 3 telephone lines to connect with Augusta County Mutual Telephone Co.'s switchboard. Address City Mgr.

Textile Mills.

Ark., Little Rock—Cotton Cloth.—Arkansas Cotton Mills Co., organized with \$3,000,000 capital, to erect and maintain chain of mills to mfre. cotton into cloth.

N. C., Lenoir—Hosiery.—Hickory Hosiery Mills, Hickory, N. C., will establish branch mill No. 3; rent building; install 125 machines; mfre. men's and women's hose; daily output 500 doz. pairs. Supersedes recent item. (See Machinery Wanted—Knitting Machinery.)

Va., Roanoke—Twine.—Morice Twine Corp., organized with \$250,000 capital, purchased Twine Mill Corp.; will enlarge plant; mfre. twine; E. L. Hege, Res. Mgr.

Water-Works.

Ga., Cordele.—Will vote Apr. 20 on \$10,000 bonds to extend water mains; J. Gordon Jones, Mayor.; W. G. Webb, Engr. (Lately noted.)

Md., Frederick.—Plans issuing \$22,000 bonds to complete partly installed water system and improve streets. Address The Mayor.

Miss., Pascagoula.—Voted to purchase water and light plants. Address The Mayor. (Lately noted to vote.)

Mo., Kirksville.—Will install water-works; contemplates voting on \$160,000 to \$200,000 bonds; Mayor Neil.

N. C., Gastonia.—Will construct mechanical filtration plant; bids until Mch. 15; R. G. Cherry, Mayor; Wm. M. Piatt, Engr., Durham, N. C. (See Machinery Wanted—Filter Plant.)

Tex., Chillicothe.—Let contract to N. C. Nichols Co., Wichita Falls, Tex., to extend water-works and construct sewer system.

Tex., Mineral Wells.—Will complete Lake Mineral Wells Reservoir; lay 25,500 ft. 10 and 12-in. pipe line; construct reinforce concrete and 1 brick pump station; install electrically-driven pumps and motors, 20,000 ft. transmission line, filter units, valves, etc.; bids until March 1; K. M. Brayer, Mayor; N. W. McClendon, Engr. (See Machinery Wanted—Water-works.)

Tex., Bay City.—Let contract to Southern Well Drilling Co., Houston, Tex., to drill well and install deep-well pump; cost \$8750; A. D. Hensley, City Secy. (Lately noted bids until Feb. 15.)

Tex., Rogers.—Rogers Water-Works Co., capital \$60,000, inceptd. by J. B. Durrett, Lee Countess and T. S. Hendricks.

Tex., Weslaco.—Installing water-works. Address The Mayor.

Va., Coeburn.—Coeburn Water Co., capital \$50,000, organized with W. S. Dodd, Prest.; J. M. Quillin, Jr., Secy-Treas.

W. Va., Kegley.—Virginian Ry., H. Fernstrom, Ch. Engr., Norfolk, Va., will construct dam to provide water supply for yards and shops at Princeton, W. Va.

Va., Portsmouth.—Let contract to Bradley & Davis to erect pumping station addition; \$3255.30; 1 story; 49x20 ft.; brick and mill construction; slate roof; Geo. P. Jersey, City Mgr.; M. L. Parker, Archt., Municipal Bldg. (Lately noted bids until Feb. 15.)

W. Va., Princeton.—Virginian Ry. Co., H.

Fernstrom, Ch. Engr., Terminal Bldg., Norfolk, Va., purchased land preparatory to constructing dam to provide water supply to yards and shops; detail plans, including dam for a 2350,000-gal. pond, have not been developed.

W. Va., St. Albans.—St. Albans Light Water & Ice Co., Myron G. Campbell, will extend water-works and construct 1,500,000 gal. filter plant; total cost \$75,000; H. K. Bell Engr., Lexington, Ky.

Woodworking Plants.

Fla., Jacksonville—Furniture.—Reed Furniture Co., capital \$50,000, inceptd. with L. Q. Read, Prest.-Treas.; C. D. Towers, Secy.

Fla., New Port Richey—Furniture, etc.—Palm Products Co. let contract to Franklin F. Davis, Jacksonville, Fla., for woodworking mch'y. and equipment. (Lately noted inceptd. capital \$10,000.)

Fla., Palmetto—Crates, etc.—Palmetto Crate Co., capital \$100,000, inceptd. with E. C. McLean, Prest.; M. O. Harrison, V.-P.; C. E. Gibbons, Secy.-Treas.; J. C. Perry, Sup't. mfr. orange boxes and vegetable containers.

Md., Berlin—Millwork.—E. S. Adkins & Co. will rebuild branch plant burned at loss of \$8000 to \$10,000.

Md., Easton—Wheelbarrows, etc.—Atlas Wheelbarrow & Truck Co. (lately noted inceptd. capital \$30,000) organized with William Reddle, Prest.; Jas. C. Mullikin, V.-P.; N. E. Clark, Secy.-Treas. and Mgr.; will erect 6135-ft. brick building; construction supervised by plants Supt.; install woodworking mch'y. band saw, planer, lathe, joiners, etc.; bid until Mch. 10; Geo. A. Poole, Constr. Engr. (See Machinery Wanted—Woodworking Mch'y.)

Miss., Moss Point—Woodenware.—Gulf Woodenware Co., capital \$25,000, inceptd. by T. L. Perkins, Moss Point; B. B. Hobdy, Kreole, Miss.

S. C., Greenville—Spools.—Greenville Spool & Mfg. Co. increased capital from \$10,000 to \$50,000.

S. C., Florence—Furniture.—S. Vaughan Co., E. L. Oulla, Secy.-Treas., increased capital from \$8000 to \$75,000.

Tenn., Lonsdale (P. O. Knoxville).—Furniture, etc.—Lonsdale Mfg. Co., capital \$100,000, inceptd. by C. F. Roth, Mitchell Long, Leo L. Fanz.

Tex., Dallas—Furniture.—Haverty Furniture Co. will probably rebuild burned building loss \$200,000.

Tex., Houston—Cooperage.—Hirsch Cooperage Co. increased capital from \$150,000 to \$200,000.

Tex., San Antonio—Furniture.—Alamo-Pet Furniture Co. increased capital from \$100,000 to \$125,000; changed name from Alamo Furniture Co.

Va., Berryville—Baskets, etc.—Berryville Basket Co., Henry C. Warden, Prest., under construction 4 buildings for mfr. of fruit baskets, wooden containers, barrels, etc.; initial daily capacity 3600.

Va., Bristol—Chairs.—Empire Chair Co. will probably rebuild plant burned at loss of \$80,000.

Fire Damage.

Ala., Georgiana.—School building; loss \$50,000. Address Board of Education.

Ark., Bentonville.—D. L. Riddle's residence and smokehouse, near Bentonville.

Ark., El Dorado.—Norman Hotel, Jas. Youngblood, Mgr.; residences of W. W. Wood and Robert Melton, on Washington Ave.; total loss \$50,000.

will receive bids until Mch. 24 to erect fire-proof Masonic temple; 6 stories and basement; 56x103 ft.; low-pressure steam heat; vacuum cleaner; passenger elevators; plans and specifications from Jas. B. Urquhart, Archt., Palmetto Bank Bldg. (Previously noted to cost \$250,000.)

Tex., El Paso.—Young Men's Christian Association, S. J. Brent, Gen. Secy., will erect \$13,200 annex to central branch. (Previously noted.)

Tex., Houston.—Arabia Temple, S. M. Lister, Potentate, will expend \$20,000 to remodel club house on Walker Ave. and Franklin St.

Va., East Radford.—Virginia May Lodge is considering erecting Masonic Temple on 1st St.; cost about \$35,000.

Va., Richmond.—Acca Temple Building Corp., Preston Belvyn, Prest., was chartered with \$1,100,000 capital; will erect home for Ancient Arabic Order, Nobles of the Mystic Shrine.

Bank and Office.

Ark., Little Rock.—W. B. Worthen & Co. will expend \$10,000 to remodel Boyle Bldg. for bank-room and offices.

Fla., Miami.—Bedford Building Co. plans to erect 8 additional stories to 2-story Bedford Bldg. at 129 N. E. 1st St.; renaissance type of architecture; construction around patio; Hampton & Reimert, Archts., 206 Bedford Bldg.

Md., Baltimore.—Standard Oil Co., Pier 2, Pratt St., will expend \$17,500 to remodel building, 156-58 Mount Royal Ave., for office and automobile supply station.

Md., Baltimore.—Merchants & Miners' Transportation Co., Light and Redwood Sts., will expend \$35,000 to remodel building, 112-14 S. Gay St., for offices; Frainie Bros. & Haigley, Contr., 18 Clay St.

Okla., Okmulgee.—Commerce Investment Co., Box 646, Richard Gill, Secy., will receive bids until Mch. 28 to erect 7-story office and store building, including heating, plumbing and wiring; 50x140 ft.; reinforced concrete; brick and stone face; concrete and tile floors; hollow fireproof tile; interior tile; ornamental terra-cotta; steel sash and trim; steam heat; Smith, Rea, Lovitt & Center, Archts. (Lately noted.)

Tex., Houston.—Federal Reserve Bank of Dallas, Tex., receives bids until Mch. 10 to erect branch bank at Caroline St. and Texas Ave., Houston; 85x90 ft.; reinforced concrete and stone; electric elevators; separate bids considered on general construction, mechanical work, bank fixtures and vault work; plans and specifications from Sanguinet, Staats & Gottlieb, Archts., Houston; Sanguinet & Staats, Fort Worth; Federal Reserve Bank, Dallas, or Houston Branch of Federal Reserve Bank of Dallas. (Previously noted.)

Tex., Poth.—Eckels & Wolfert will erect bank building. (See Stores.)

Va., Roanoke.—T. W. Fugate and W. P. Henritze purchased Anchor Bldg. at Henry St. and Kirk Ave., and plan to erect 5 additional stories for offices; concrete and steel; 96x120 ft.; remodel first 3 floors for stores.

W. Va., Wheeling.—Fulton Bank & Trust Co. will alter building.

Churches.

Ala., Selma.—Negro Baptist Congregation will erect \$30,000 church; colonial architecture; J. W. McCell, Archt.; concrete brick supplied by Alabama Concrete Products Co., Selma.

Ark., Walnut Ridge.—Methodist Church will erect \$40,000 building. Address The Pastor.

Fla., Live Oak.—Methodist Episcopal Church

South, Rev. W. A. Myres, Pastor, will erect \$40,000 building lately noted; 40x95 ft.; brick and concrete; tile roof; concrete and pine floors; hot-air heat; indirect electric lighting; metal ceilings; rolling partitions; bids opened about Mch. 15. (See Machinery Wanted—Brick; Roofing; Ceiling.)

Fla., Ocala.—Methodist Church will erect building. Address The Pastor.

Ga., Augusta.—Reid Memorial Church will erect addition; Sunday-school: 20 classrooms, auditorium, etc.; Willis Irvin, Archt.

Ga., Columbus.—St. Luke's Methodist Church will enlarge building. Address The Pastor.

Ga., Columbus.—First Baptist Church plans to enlarge Sunday-school building. Address The Pastor.

Ga., Columbus.—Comer Memorial Baptist Church will enlarge building. Address The Pastor.

Ga., Dalton.—Mount Rachel Baptist Church will erect Sunday-school annex. Address The Pastor.

Ky., Blackford.—Baptist Church will erect building to replace structure lately noted burned. Address The Pastor.

Ky., Lexington.—Calvary Baptist Church will erect \$40,000 Sunday-school building; contract let in 30 days. Address The Pastor.

Ia., De Ridder.—Baptist Church, J. Y. Dempsey, Chrmn. Bldg. Comm., will erect \$45,000 building.

Md., Catonsville.—Presbyterian Church, Rev. John A. Nesbit, Pastor, will erect church and community buildings, each 50x100 ft.; former to have tower, 125 ft.; brick; slate roofs; pine floors; steam heat; church auditorium to seat 500; W. Gordon Beecher and Smith & May, Asso. Archts., Calvert Bldg., Baltimore; bids opened Feb. 28; following contractors estimating: Consolidated Engineering Co., Calvert Bldg.; Hicks, Tase & Norris, 106 W. Madison St.; Morrow Bros., Fidelity Bldg.; West Construction Co., American Bldg.; M. A. Long Construction Co., Munsey Bldg.; Gladfelter & Chambers, 36th St. and Roland Ave.; Chas. L. Stockhausen Co., Gay and Water Sts.; E. G. Turner, 15 E. Fayette St.; John Hiltz & Sons, 2 E. Redwood St.; G. Walter Tovell, Eutaw and McCulloch Sts.; Frainie Bros. & Haigley, 18 Clay St.; Cogswell-Koether Co., 406 Park Ave.; all Baltimore.

N. C., Asheville.—First Emanuel Church, S. French Broad Ave. and Philip St., Rev. W. D. Peters, Pastor, plans to enlarge building.

N. C., Gastonia.—Main St. M. E. Church will erect \$10,000 young people's building; Chas. C. Wilson, Archt., Columbia, S. C.; C. W. Spence, Contr., Gastonia; foundations completed.

N. C., Gastonia.—Lutheran Church will erect chapel; preliminary plans approved; Chas. C. Wilson, Archt., Columbin, S. C.

N. C., Wilmington.—Fifth Ave. Methodist Church, Rev. G. S. Frazer, Pastor, will erect \$55,000 Sunday-school building; 3 stories; 40x130 ft.; pressed brick, hollow tile and steel; slate roof; wood and concrete floors; hollow fireproof tile; ornamental terra cotta; rolling partitions; ventilators; steel sash and trim; Jas. F. Gause, Archt. Address T. J. Gore, Chrmn. Bldg. Comm., 511 Dock St. (See Machinery Wanted—Building Material; Electric Fixtures; Millwork; Roofing; Seating; Church Equipment; Tables.)

N. C., Winston-Salem.—Mt. Calvary Baptist Church, colored, will erect building at Hickory and 3d Sts.; stone; 3000 ft. floor space; day labor. Address The Pastor.

N. C., Washington.—First Christian Church will erect \$50,000 to \$75,000 building; 45x15 ft.; 3 wings; brick; slate roof or equivalent; wood floors; hot-air or steam heat; J. M.

McMichael, Archt., Charlotte. Address Bldg. Comm. (Lately noted.)

N. C., Winston-Salem.—Philadelphia Moravian Church, J. T. Jones, N. N. Shore and others, Comm., will erect building at Philadelphia; frame; 40x60 ft.; seat 500.

Okla., Chelsea.—Methodist Church, Rev. R. O. Stewart, Pastor, will erect \$30,000 building.

Okla., Miami.—Methodist Church, Rev. D. A. Dowson, Pastor, will erect \$42,000 church and Sunday-school building; seat 600; 20 classrooms.

Okla., Red Fork.—Plans to erect city hall and jail. Address The Mayor.

Okla., Sapulpa.—Christian Church plans to erect \$60,000 building. Address the Pastor.

S. C., Allendale.—Methodist Episcopal Church will erect building; plans and specifications completed; Chas. C. Wilson, Archt., Columbia.

S. C., Denmark.—Methodist Episcopal Church will erect addition to building; plans and specifications completed; Chas. C. Wilson, Archt., Columbia; day labor under supervision of J. Arthur Wiggins, Chrmn. Building Comm.

Tenn., Memphis.—Linden Ave. Christian Church will expend \$75,000 to remodel building and erect Sunday-school annex; 3 stories and basement; brick; concrete foundation; 44x55 ft.; built-up roof; hardwood floors; steam heat, \$7000; Anker F. Hansen, Archt., 612 McCall Bldg., will receive bids until about Apr. 1.

Tenn., Memphis.—Linden Avenue Christian Church will erect \$80,000 to \$100,000 addition; 3 stories; 45x55 ft.; brick; concrete foundation; A. F. Hansen, Archt., 612 McCall Bldg., reported to receive bids until Apr. 1.

Tex., Ballinger.—Baptist Church will erect \$75,000 building. Address The Pastor.

Tex., Cleburne.—Synagogue, Jake Cohen, F. Weinberg and Sam. Garber, Trustees, plans to erect building on South Cadde and Buffalo Sts.; site 105x150 ft.

Tex., Jefferson.—Howerton Baptist Church, W. H. Erambert, Jr., Chrmn. Bldg. Comm., will erect building at Clarksville and Walnut Sts.

Tex., Jefferson.—Methodist Church, R. E. Duff, Chrmn. Bldg. Comm., will remodel building.

Tex., Muldoon.—Baptist Church will erect building on South Side. Address The Pastor.

Tex., San Antonio.—Riverside Park Baptist Church, D. F. Youngblood, E. E. Pickle and H. L. Strieb, Comm., plans to erect annex.

Va., Portsmouth.—Westhaven Baptist Church will erect \$25,000 building; 60x75 ft.; brick and tile; slate roof; pine floors; hot-air heat; \$600; electric lights H. L. Cain, Archt., 12 N. 9th St., Richmond, will receive separate bids. (Lately noted.)

Va., Portsmouth.—Parkview Baptist Church, Dr. E. E. Dudley, Pastor, F. W. Beasley, Chrmn. Bldg. Comm., will erect church and Sunday-school building at Hatton and A Sts.; cost about \$200,000; gray brick; stone trim and columns; red tile roof; dome; seat 1200. (Previously noted.)

Va., Graham.—Presbyterian Church, Rev. W. M. Lorrimer, Pastor, plans to erect building.

W. Va., Huntington.—St. Paul's Lutheran Church will erect \$80,000 building; 45x95 ft.; 2 stories and basement; brick and stone; slate roof; wood and concrete floors; Wm. Francis Diehl, Archt. (Lately noted.)

City and County.

Ga., Chickamauga.—W. H. Sears, Archt., will receive bids until Mch. 7 for erection of auditorium for which \$25,000 bonds were recently voted.

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La., Alexandria—Fire Station.—Commission Council receives bids until Mch. 7 to erect fire alarm building near 5th and Lee Sts.; plans and specifications at office of E. Leo Ball, Archt.

N. C., Black Mountain.—Fire Department, R. E. Currier, Chf., plans to erect fire station on Asheville Rd.

N. C., Charlotte—Home.—Mecklenburg County Comms., J. B. McLaughlin, Chmn., will erect \$30,000 woman's home on county home plantation; W. S. Alexander, Mayor John M. Wilson and others, Bldg. Comm.

Okl., Bartlesville.—Will vote April 5 on \$50,000 bonds to erect convention hall. Address The Mayor.

W. Va., Glenville—Jail, etc.—Gilmer County Court, N. E. Rymer, Clk., will receive bids until Mch. 15 to erect jail and office building; cost \$13,000; 2 stories and basement; 35x37 ft.; asbestos shingle roof; sheet lead valleys; hardwood and concrete floors; hot-water heat; electric lights; interior tile; metal doors; wire glass; steel sash and trim; A. N. & R. R. West, Archts. (Lately noted.)

Courthouses.

Miss., Belzoni.—Humphreys County Comms. will erect \$300,000 courthouse and jail; let contract Apr. 11; Kramer & Lindsley, Archts., Kress Bldg., Jackson. (Lately noted.)

Okl., Cherokee.—Alfalfa County, H. G. Frizzell, Clk., rejected bids to erect \$125,000 courthouse; 3 stories and basement; brick, stone and reinforced concrete; gravel roof; concrete floors; metal doors; vaults; wire glass; vault lights; ventilators; steel sash and trim; steam heat; electric lights; Tonini & Bramblett, Archts., Terminal Bldg., Oklahoma City; will invite new bids within 30 days. (Lately noted.)

Tex., Bonham.—Commissioners' Court will remodel Fannin County Courthouse. Address County Auditor Harkins.

Dwellings.

Ala., Birmingham.—Montgomery Real Estate & Insurance Co. will erect 8 or 10 dwellings in Arlington Pl.; cost \$50,000.

Ala., Birmingham.—Jemison & Co. will erect 50 dwellings at Central Park; cost \$75,000.

Ark., Hope.—C. F. Brown will erect \$10,000 residence.

Ark., Hope.—R. M. Lagrone will erect residence.

Ark., Springdale.—Roy Joyce and Webb Powell will erect 2-story brick residence on Emma Ave.

Ark., Springdale.—Walker Bros. will erect 6 dwellings.

D. C., Washington.—G. N. Ray will expend \$6,000 to repair building at 1516 K Sts.

D. C., Washington.—R. E. Funkhouser will erect \$7000 frame dwelling at 5408 Illinois Ave.

D. C., Washington.—H. F. Dismar will expend \$10,000 to repair residence at 3124-26 14th St.

Fla., St. Augustine.—Harry P. White purchased lot in Nelmar Ter. and plans to erect residence.

Fla., Tampa.—L. H. McIntyre will erect residence with garage and servants' quarters on 8 Delaware Ave.; colonial type; cost \$12,500; 2 stories; M. Leo Elliott, Archt.

Fla., Tampa.—Nichols Geraci will erect \$20,000 residence in Suburb Beautiful; brick; tile roof; M. Leo Elliott, Archt.

Ga., Augusta.—A. S. Bourne will repair residence lately noted burned at \$20,000 loss.

Ga., Augusta.—H. T. Bridges will erect 1½-story residence on the Hill; hollow tile and

stucco; hot-air heat; hardwood and tile floors; asphalt shingle roof; Willis Irvin, Archt., 1404 Lamar Bldg.; Mr. Irvin is also preparing plans for 5 dwellings for undisclosed owner; 6 rooms; 2 stories; frame. (See Machinery Wanted—Building Material.)

Ga., Statesboro.—Fred T. Lanier will erect frame residence; 8 rooms; composition roof; interior tile; day work; Willis Irvin, Archt., Augusta.

Md., Baltimore.—Arthur E. Reinheimer will erect 4 bungalows on James Ave. near Chester St.; 1½ stories; 24x40 ft.; cost \$12,000.

Md., Baltimore.—Edw. J. Storck, Munsey Bldg., will erect five 3-story dwellings at 3200-08 Guilford Ave.; cost \$36,000.

Md., Baltimore.—Jas. Keelty, 112 Poplar Grove St., will erect 94 two-story brick dwellings on Linnard St., Edmondson Ave., Edgewood St., Loudon Ave. and Norman Ave.; total cost \$184,000; Fredk. E. Beall, Archt., 1335 N. Gilmor St. (Previously noted.)

Md., Frederick.—W. Verl Forney purchased lot on College Terrace and plans to erect residence.

Mo., St. Louis.—The Lisetta Realty & Investment Co. purchased property in the Cleveland subdivision and plans to erect number of dwellings, flats, etc.

N. C., Charlotte.—C. S. Oakley of Pineville purchased lots in Dilworth and plans to erect 20 dwellings within a year.

N. C., Elkin.—P. C. Reich plans to erect residence on W. Main St.

N. C., Elkin.—W. A. Finney purchased lot on Bridge St. and plans to erect residence.

Okl., Oklahoma City.—E. S. Bright will erect \$50,000 residence, 2245 Linwood Blvd., and \$5000 residence, 1865 W. 12th St.

Okl., Oklahoma City.—G. A. Nichols will erect 4 dwellings; total cost \$21,000.

Okl., Tulsa.—G. A. Edelsvard is erecting studio and residence at 1024 S. Buena Vista Ave.; cost \$25,000; tile and stucco; 2 stories; 16x26 ft.; Edelsvard & Fleming, Archts., Kennedy Bldg.

S. C., Anderson.—Rev. Thos. J. Mackin, P. O. Box 82, will erect \$6000 parsonage; frame; brick foundation; 8 rooms; 1 story; fireproof; composition shingle roof; hardwood and concrete floors; plaster board; interior tile; rolling partitions; J. J. Baldwin, Architect. Address owner. (Lately noted under Churches.)

S. C., Barnwell.—J. E. Harley will erect 10-room buff brick residence; red Spanish tile roof; hardwood and tile floors; vapor heat; Willis Irvin, Archt., 1404 Lamar Bldg., Augusta, Ga.; day work; owner and archt. purchase material.

S. C., Greenville.—W. N. Dodd will erect 7000 1-story residence on Tindal Ave., Cagle Park.

Tenn., Columbia.—Maury Pigg purchased lot on School St., between 7th and 8th Sts. and plans to erect residence.

Tex., Dallas.—Power Investment Co. will erect 9 dwellings on Irvin St.; 4 rooms; frame; total cost \$10,800.

Tex., Dallas.—R. W. Higginbotham will erect \$10,000 residence at 4329 Avondale Ave.; 8 rooms; brick veneer.

Tex., Dallas.—Dines Building Co. will erect \$10,000 residence at 714 Skillman St.; 7 rooms; brick veneer.

Tex., Houston.—E. L. Crane & Co. plans to erect 100 dwellings in connection with development of property adjoining Montrose and Hyde Park.

Tex., San Antonio.—R. A. Richey will erect 4-room dwellings at Garza and Salenas Sts.; cost \$14,000.

Va., East Radford.—Gilbert & Fitzpatrick will erect 3 dwellings; construction to begin within few weeks.

W. Va., Sutton.—Emory, Lanta and Jno. Given will erect three 6-room cottages.

W. Va., Huntington.—Huntington Housing Corp., 910 Third Ave., D. J. Pancake, Prest.; Wm. Pyles, V.-P., will erect number of dwellings; brick and frame; hot-air and gas heat; electric lights; hollow fireproof tile; metal ceilings; hardwood and concrete floors; ornamental terra-cotta; safes; interior tile; rolling partitions; wire glass; vault lights; ventilators; steel sash and trim; J. W. Fisher, Archt., Logan; Wm. Pyles Contr. (See Machinery Wanted—Building Material.)

W. Va., Sutton.—L. W. Hawkins will erect 2 cottages in South Sutton.

W. Va., Sutton.—Sutton Building Corp., P. J. Berry, Fred. L. Fox, A. L. Morrison and others, incptd. with capital of \$25,000.

Government and State.

Okl., Hugo—Postoffice.—J. H. Brader will erect postoffice.

Hospitals, Sanitariums, Etc.

Fla., Bradenton.—Manatee County Board of Comms., Robert S. Roesch, Clk., receives bids until Mch. 7 to erect addition to county hospital.

Tex., Wichita Falls.—Wichita County voted \$75,000 bond issue to supplement similar issue voted by city for improvements to general hospital. Address The Mayor or County Comms. (Previously noted.)

Hotels.

Ark., Ashdown.—Lee Wilson will erect brick hotel; raze present frame hotel and use lumber to erect 2 dwellings.

Ark., Little Rock.—Wilkins & Co. contemplate building hotel at Louisiana and Capitol Aves.

Fla., Miami.—Avery C. Smith is interested in corporation to develop southern section of Miami Beach; plans include erection of hotel, theater, residences and bathhouses.

Fla., Tallahassee.—Chamber of Commerce is promoting erection of hotel.

Fla., Tampa.—F. A. Ward will erect building at Tampa and Estelle Sts. for hotel and stores; 2 or 3 stories; brick; also erect garage.

Fla., Tampa—Home.—Old People's Home will erect building.

S. C., Greenville.—H. B. Springs is Chmn. of Comm. securing information relative to erection of hotel; details indefinite.

Tex., Tyler.—Chamber of Commerce is promoting erection of \$150,000 hotel.

Va., Hot Springs.—Virginia Hot Springs Co. will erect \$200,000 addition to Homestead Hotel; 300x100 ft.; 1 story and basement; steel frame, brick and hollow tile; maple, edge-grain pine and concrete floors; Johns-Manville built-up roof; hollow fireproof tile; interior tile; blower type steam and vacuum heat; interior lighting decorations; Elzner & Anderson, Archts., Cincinnati; construction by owner under supervision of R. H. Patterson, Ch. Engr., who may be addressed. (Lately noted.)

Miscellaneous.

Ark., Prairie Grove—Community Club.—W. F. Bell, Chmn. Committee, planning erection of community club.

Fla., Clearwater—Clubhouse.—Clearwater Country Club will erect clubhouse; Avery & Smith, Archt. (Lately noted.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ga., Columbus—Clubhouse.—Muscogee Club will expend \$50,000 to improve building; construct 4 storerooms.

La., New Orleans—Stadium.—John Dillon, Frankie Edwards and Al Buja are interested in company to erect \$50,000 boxing stadium; seat 8000.

N. C., Wilmington—Clubhouse.—Cape Fear Country Club, Geo. Kidder, Prest., will erect \$40,000 building to replace burned structure.

Tenn., Chattanooga—Clubhouse.—Mountain City Club is considering erection of \$50,000 addition.

Tenn., Johnson City—Library.—Mayne Williams Memorial Library Assn. plans to erect \$35,000 to \$40,000 building.

Tenn., Knoxville—Clubhouse.—Wonderland Park, E. L. Bowman, Prest., will erect \$15,000 annex; equipped with lights, water and sewers.

Tenn., Memphis—Clubhouse.—Catholic Club, P. M. Canale, Prest., will erect \$300,000 club building; 97x149 ft.; 4 stories and basement; steel and reinforced concrete; 6x9 tile roof; tile, maple and concrete floors; hollow fireproof tile; ornamental terra-cotta; safes; metal doors; vaults; wire glass; vault lights; ventilators; bids opened Apr. 30. Address Regan & Weller and H. J. Cramer, Asso. Archts., 834 Bank of Commerce Bldg. (Lately noted.)

Tex., Houston—Clubhouse.—Federated Clubs, Mrs. Eli Ensign, Chrmn., Bldg. Comm., plans to erect clubhouse.

Railway Stations, Sheds, Etc.

Ga., Augusta—Southern R. R., J. S. Lemon, Ch. Engr., M. W. & S., Lines East, Charlotte, N. C., will expend \$20,000 to repair freight station lately noted damaged by fire and explosion.

Md., Baltimore—Washington, Baltimore & Annapolis Electric R. R. Co., J. J. Doyle, Gen. Mgr., Terminal Bldg., Park Ave. near Fayette St., will erect passenger station at Howard and Lombard Sts.; Dreher, Churchman, Paul & Ford, Archts., 1424 Walnut St., Philadelphia.

S. C., Union—Southern Express Co. will erect building; 40x80 ft.; fireproof; cost \$8000 to \$10,000.

Schools.

Ala., Georgiana—Board of Education will erect structure to replace school noted burned at loss of \$25,000.

Fla., Tampa—Sulphur Springs School Dist. No. 50, A. M. Farrell, Chrmn. Trustees, contemplates election on bonds to erect school.

Ga., Columbus—Board of Trustees receives bids until Mch. 10 to erect 3 1-story school buildings; separate bids for each addressed to R. B. Daniel, Supt.

Ga., Decatur—Board of Education, F. T. Hopkins, Chrmn., will receive bids until Mch. 3 to erect high school; plans and specifications at office Edwards & Sayward, 609 Chamber of Commerce Bldg., Atlanta; City Hall, Decatur, and Builders' Exchange, Atlanta.

Ga., Louisville—School Dist. No. 1 will erect \$55,000 building; 40x150 ft.; 2 stories and basement; brick; slate roof; maple floors; ornamental terra-cotta; steam heat; city lighting; R. S. Pringle, Archt., Atlanta; contract to be let Mch. 1. Address E. M. Willie, Louisville.

Ga., Statesboro—City will erect \$75,000 school building; 10 recitation-rooms; domestic science and manual training departments; auditorium to seat 500; gymnasium; tile and brick; fireproof stairs; metal roof; composition blackboard; vapor heat; bonds to be sold. Address Willis Irvin, Archt., Augusta. (Previously noted.)

Ky., Marion—City votes Mch. 5 on bonds

not to exceed \$20,000 to erect grade school. Address Board of Education.

Ky., Pineville—Board of Education, R. H. Shipp, Supt., will erect auditorium and classroom to school; cost about \$35,000; bond issue planned.

Ky., Whitesburg—Letcher County Board of Education will erect 3 school buildings. Address E. B. Hale, Supt. of Education.

Md., Westminster—Western Maryland College, Dr. A. Norman Ward, Prest., will erect athletic field and concrete grandstand to seat 1000; require 15,000 cu. yds. excavation and 5000 ft. tile drainage; cost \$35,000. (Lately noted.)

Miss., Gulfport—City will erect \$40,000 ward school; brick; asbestos slate roof; hardwood floors; 45x84 ft.; 2 stories; hot-water heat; \$300; city lights; bids opened Mch. 3; E. M. Napier, Secy. School Board. Address Shaw & Woleben, Archt.

Miss., Grenada—Board of Education, W. H. Kirk, Chrmn. Bldg. Comm., receives bids until Mch. 25 to erect 2-story and basement high school; brick; plans and specifications at office R. A. Heavener, Archt., Jackson, Tenn. (Lately noted.)

Mo., St. Joseph—City votes April 2 on \$1,700,000 school bonds. Address Board of Education.

N. C., Durham—Trinity College, Dr. Few, Prest., will soon begin construction of proposed Southgate Memorial Dormitory for women; first of several buildings contemplated; Thos. W. Soers, Landscape Archt., Philadelphia. (Previously noted.)

N. C., Lewiston—Bertie County Board of Education, Herbert W. Early, Supt., Windsor, will receive bids until Mch. 15 to erect 8-room and auditorium brick and frame school for Woodlawn-Lewiston School Dist.; plans and specifications at office W. J. Wilkins & Co., Archts., Wilmington, and office of Mr. Early. (Previously noted.)

N. C., Lexington—Davidson County Board of Education ordered consolidation of special high school district composed of Dacotah, Fowler, Hargrave, Greenwood, Pilgrim, Nokomis, Southside and Lexington, and called election on \$225,000 bonds to erect high school.

N. C., Ramseur—School Dist. is considering \$75,000 bond election; enabling bill pending in Legislature. Address Randolph County Board of Education, Ashboro.

N. C., Welcome—Davidson County Board of Education, Lexington, plans to consolidate Welcome, Arnold, Ebenezer and Wagners districts; call vote on special tax to erect elementary and high school.

N. C., Weaverville—Buncombe County Board of Education, Ethel Terrell, Supt., Asheville, received bids until Mch. 4 to erect \$40,000 school; 2 stories; steel roof; 600 rooms; accommodate 700; C. C. Hook, Archt., Charlotte; plans and specifications at office of Superintendent. (Lately noted.)

Okl., Red Fork—City plans to erect school building. Address The Mayor.

Okl., Shawnee—Oklahoma Baptist University, Dr. J. A. Tolman, Prest., will erect \$60,000 dormitory; 3 stories and basement; brick; stone trim; composition roof; Ed. Peters, Archt. (Lately noted.)

S. C., Camden—School Board will erect grammar school; 13 rooms and auditorium; Chas. C. Wilson, Archt., Columbia; bids invited within few weeks; bond issue available. (Lately noted to erect high school.)

S. C., Charleston—High School Trustees receive proposals until Mch. 23 for plans, specifications and drawings for 3-story high-school building to be erected on Rutledge Ave., between Mill and Doughty Sts.; specifications to provide for and state cost of building,

plumbing, heating and ventilating each separately; details at office of R. B. Royall, Principal.

S. C., Clover—Clover School Dist. votes Mch. 5 on \$40,000 bonds to erect high school. Address Dr. I. J. Campbell, Mayor.

S. C., Columbia—Chicora College for Women, Dr. S. C. Byrd, Prest., plans to erect 30 buildings on 60-acre site, including administration and liberal arts building with auditorium to seat 1200, fine arts, science, home economics, Bible school, library, museum, gymnasium with natatorium and athletic field, social center with reception-rooms, parlors, refectory, etc., 6 dormitories to accommodate 100 students each, president's house, 6 professors' houses, house for superintendent of buildings and grounds, central heating plant, refrigerating plant; also construct campanile, plaza, walks, driveways, terraces, ornamental planting; now at work on preliminary studies on 4 dormitories and refectory, for which bids will be invited upon completion of plans and specifications; Chas. C. Wilson, Columbia, and Carriere & Hastings, Assoc. Archts., 52 Vanderbilt Ave., New York.

S. C., Darlington—St. John's Academy will erect 12-room addition to grammar school; Chas. C. Wilson, Archt., Columbia; preliminary plans approved, pending bond issue.

S. C., Heathspings—School Board will erect high school; Chas. C. Wilson, Archt., Columbia; bonds available.

S. C., Leesville—Trustees Summerland College will erect \$50,000 dormitory; brick and fireproof tile; galvanized or tile roof; concrete and hardwood floors; plaster board; metal ceilings; steam heat; electric lights; freight elevator; bids opened about Apr. 1. Address P. E. Monroe, Prest.

S. C., McConnellsburg, —McConnellsburg School Dist. Trustees will erect \$10,000 high school.

S. C., Mt. Croghan—Board of Education will erect addition to school building for auditorium; preliminary plans appproved; Chas. C. Wilson, Archt., Columbia.

S. C., Spartanburg—City Board of Education, E. S. Tenement, Chrmn., will receive bids until Mch. 10 to erect high school; 3 stories; reinforced concrete, brick and terra cotta; tar and gravel roof; hardwood, tile and marble floors; steam heat; sold \$300,000 of bonds. Address G. Lloyd Preacher & Co., Archts., Atlanta, Ga., for information.

S. C., Springfield—School Board will erect high-school addition; Chas. C. Wilson, Archt., Columbia; day labor.

S. C., York—Yorkville School District No. 11 is considering \$125,000 bond issue to erect school building. Address Board of Trustees, Thos. F. McDow, Chrmn.

Tenn., Lewisburg—Price-Webb School will erect dormitory to replace burned structure. Address The Principal.

Tenn., National Soldiers' Home—Barracks, Mountain Branch, N. H. D. V. S., J. C. Donnelly, Treas., receives bids until Mch. 8 to erect 5 sets of double quarters; copies of instructions and specifications from Mr. Donnelly.

Tex., Canadian—School Board, W. A. Stigler, Supt., will erect \$30,000 ward school; 3 rooms; brick; asphalt roof; wood floors; vacuum steam heat; \$3500; bids opened in March. (Previously noted.)

Tex., Dallas—St. Mary's College, Bishop Conductor, Harry T. Moore, Chrmn. Board of Trustees, plans to raise \$250,000 to erect dormitory and remodel main building.

Tex., Electra—Electra School Dist. will erect ward building and improve present structures; \$125,000 bonds available. Address Board of Education.

Tex., El Paso—Young Men's Christian

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Christian

Assn., S. J. Brent, Gen. Secy., will erect train-
ing school on San Antonio St.; estimated cost
\$225,000.

Va., Dunganon.—Floyd District School
Board, W. H. Loudy, Chrmn., will receive
bids until Mch. 19 to erect high school; 60x138
ft.; auditorium, 44x75 ft.; brick. Address H.
Doriot, Archt., Surgeon Bldg., Bristol, for
information. (Lately noted.)

Va., Hiltons.—School Board, H. J. Gardner,
Chrmn. Bldg. Comm., receives bids until Mch.
15 to erect 8-room and auditorium school;
plans and specifications at office Building
Committee.

Va., National Soldiers' Home—Officers'
Quarters.—Southern Branch, N. H. D. V. S.,
Maj. A. S. Miller, Treas., receives bids until
Mch. 7 to erect double frame house for offi-
cers' quarters; plans at office of and copies
of instruction, specifications, etc., from Treas.

Va., Witt.—County Board of Education
will erect \$30,000 high school in Dan River
Dist. Address Samuel Warren.

Va., Huntington.—Board of Education
plans to erect South Junior High School build-
ing; cost about \$300,000, and 12-room addition
to Miller School, cost about \$125,000.

Va., Frankford.—Board of Education,
Frankford Dist., C. E. Lewis, Prest., receives
bids until Mch. 19 to erect high-school build-
ing; brick veneered; bids complete with
plumbing and heating, also without; plans
and specifications at office of A. L. Fisher,
Secy.

Va., Kenova.—Board of Education, Ind.
School Dist. of Ceredo, Reuben Osburn,
Prest., Kenova, will erect \$110,000 high school;
about 150x100 ft.; 3 stories; fireproof; brick;
tile and composition roof; steel, concrete
and wood floors; furnace blast heat, about
\$6000; electric lighting; Richard M. Bates,
Jr., Archt., Huntington. Address H. L. Stone,
Secy., Ceredo. (Previously noted.)

Va., Renick.—Falling Springs District
Board of Education will erect \$40,000 school;
65x78 ft.; 3 stories; brick and tile; stone
trim; Barrett composition roof; hardwood and
concrete floors; plaster board; steam heat;
bids opened Mch. 5; Higginbotham & Knapp,
Archts., Charleston. Address M. P. Hanna,
Prest. Board of Education. (E. D. King,
Marlinton, lately noted to have contract.)

Va., Richwood.—Board of Education,
Richwood Ind. Dist., Henry S. Smith, Prest.,
receives bids until Mch. 14 to erect brick
gymnasium, including heating plant; 45x70
ft.; 2 stories and basement; cost about \$50,-
000; L. J. Dean, Archt., Foster Bldg., Hunt-
ington; plans and specifications at high-school
building, Richwood. (Lately noted.)

Stores.

Ky., Marion.—Marion Hardware & Grocery
Co., B. B. Moore and others, is reported to
erect 2-story building.

Ky., Whitesburg.—Mullins Bros. will erect
\$15,000 business building.

Md., Baltimore.—Waldorf Development Co.,
Reisterstown Rd., will erect 2 one-story brick
stores at Reisterstown Rd. and Matilda Ave.;
cost \$9000; also 1-story brick garage at Matilda
and Waldorf Aves.; cost \$15,000.

Mo., Kansas City.—Edwin E. Hunt will erect
several stores at 14th and Oak Sts.

N. C., Burlington.—Burlington Electric Co.
will erect building on Davis St.; 1 story;
brick; 20x90 ft.

S. C., Columbia.—Jno. L. Mimnaugh will
remodel Mimnaugh's Department Store, Main
and Hampton Sts.

Tex., Brenham.—A. A. Hacker & Co. pur-
chased site on West St., and will erect store
building.

Tex., El Paso.—Mayfield Building Co. will
erect \$6000 brick store in East El Paso Addi-

Tex., Poth.—Eckels & Wolfert will erect 3
brick buildings to be occupied by bank, hard-
ware and drug stores; 82 ft. frontage.

Tex., San Antonio.—Emil Wellbacher will
erect \$55,000 concrete and tile store at Carson
St. and New Braunfels Ave.

Va., East Radford.—Jackson Hardware Co.
plans to erect building on 1st St.

W. Va., Bluefield.—Russell Ritz is reported
to erect 4-story apartment and business build-
ing on Federal St.

W. Va., Bluefield.—Dr. J. S. Compton plans
to erect 3-story brick building at Federal and
Scott Sts. for stores, offices and auditorium
for lodge room.

W. Va., Guyandotte (Station, Huntington).
Chas. Fisher will erect 6-story business and
office building on Bridge St.; 46x130 ft.; con-
crete, brick and hollow tile; cost \$50,000.

W. Va., Huntington.—O. L. Stanard Dry
Goods Co. will erect building on Seventh
Ave.; 45x200 ft.; 5 to 7 stories; fireproof.

Theaters.

Ala., Birmingham.—Marvin Wise purchased
Best Theater, 2016 2d Ave., North, and will
expend \$25,000 to remodel.

Ala., Mobile.—King Bros. will erect Crown
Theater on Dauphin St.; auditorium to seat
1800; 75-ft. frontage; stage entrance on Jack-
son St.; will let contract in Mch.

Mo., St. Louis.—Jno. Karzin, Jacob Weiss,

BUILDING CONTRACTS AWARDED

Apartment-Houses.

Ala., Birmingham.—Chas. F. Marsh will
erect \$30,000 apartment-house at 30th St. and
10th Ave. South; 3 stories; brick; hardwood
floors; in-a-door beds; S. S. Parker, Contr.

Ala., Mobile.—William McDonald, Wm. F.
Clark, Jr., and others will erect \$190,000 apart-
ment-house at Charles and Government Sts.;
brick; fireproof; 6 stories; 55 suites; 2 pas-
senger elevators; 1 service elevator; garages;
Gabe Chamberlin & Son, Contrs. (Lately
noted.)

Fla., Tampa.—W. P. Hodnett will erect
2-story apartment-house on Hyde Park Ave.;
cost \$33,000; stucco and frame; composition
roof; M. Leo Elliott, Archt.; Shields Bros.,
Contrs.

Ga., Atlanta.—Investment Banking Corp.
will erect \$60,000 apartment-house at 438 North
Boulevard; 3 stories and basement; 18 suites;
58x75 ft.; brick and tile; wood beams and
columns; oak floors; steam heat, \$7000; hollow
fireproof tile; interior tile; metal doors; ven-
tilators; G. Lloyd Preacher & Co., Archts.;
Gude & Co., Contrs. (Lately noted.)

Va., Richmond.—Elizabeth V. Lee, 2511
Stuart Ave., will erect \$100,000 apart-
ment-house; 4 stories; 12 suites; 61x57 ft.; steam
heat; tin roof; B. J. Rowlett, Archt., Old
Dominion Trust Bldg.; W. E. Purcell, Jr.,
Contr., S17 E. Franklin St.

Association and Fraternal.

Tenn., Chattanooga.—Alhambra Temple
Mystic Shrine will expend \$15,000 to remodel
building for club as temporary quarters
pending erection of \$100,000 Mosque; Geo.
Collins, Contr. (Lately noted.)

Bank and Office.

Md., Damascus (R. D. Germantown).—Bank
of Damascus will erect \$6800 building; 25x35
ft.; brick; built-up asbestos roof; edge-grain
pine and concrete floors; pipeless-furnace
heat; Deleo lighting system; safes; metal
doors; vaults; P. R. Souder, Archt.-Contr.
(Lately noted.)

S. C., Greenville.—Planters Savings Bank, How-
ard B. Carlisle, Prest., Spartanburg, will

Adolph Diamant and others are reported to
erect \$225,000 theater; 3 stories and basement;
fireproof; ornamental terra-cotta; art glass
windows; canopy over entrance; seating ca-
pacity 3000.

Warehouses.

Fla., Ocala.—Lewis-Chitty Co. will erect
warehouse at Oklahoma Ave. and Osceola St.

Fla., Tampa.—Crenshaw Brothers Produce
Co. will erect \$25,000 warehouse at Tampa
and Washington Sts.; 1 story; M. Leo Elliott,
Archt.

N. C., Greensboro.—H. L. Noble is Chrmn.
Comm., promoting organization of \$150,000
company to erect several tobacco warehouses.

N. C., Winston-Salem.—Bailey Bros. will
erect 50x50-ft. addition for warehouse; brick;

Tex., Dallas.—Hutting Sash & Door Co., A. J.
Siegel, Prest., St. Louis, will erect \$50,000
warehouse at Crowds and Indiana Sts.; will
operate as Dallas Sash & Door Co.

Tex., Dallas.—Kingsbury & Witherspoon
will erect \$30,000 warehouse, 30x N. Preston
St., brick and concrete; 1 story.

Tex., El Paso.—Kelly & Pollard will erect
\$100,000 warehouse at Texas and Ange Sts.;
100x120 ft.; Trost & Trost, Archts.

Tex., Bryan.—Conyers Live Stock & Feed
Corp., Marlin, Tex., purchased site and will
erect \$25,000 building.

Churches.

Ala., Anniston.—Mt. Calvary Negro Baptist
Church will erect building at 16th St. and
Dooly Ave.; cost \$11,000; contract let. Ad-
dress The Pastor.

N. C., Charlotte.—Villa Heights A. R. P.
Church is erecting \$10,000 Sunday-school build-
ing; brick; 2 stories; N. C. Burns, Contr.

S. C., Charleston.—St. Barnabas' Lutheran
Church will erect brick building at Rutledge
Ave. and Moultrie St.; David B. Hyer, Archt.;
L. D. Long & Co., Contrs. (Previously noted.)

Va., Richmond.—Broad Street M. E. Church,
W. T. Smithdean, Chrmn. Bldg. Comm., will
erect \$200,000 building for church, Sunday-
school and social work; 130x128 ft.; stone,
brick and steel; slate roof; wood floors;
Benton & Benton, Archts., Times-Dispatch
Bldg.; Davis Bros., Contrs., 2510 W. Main
St. (Previously noted.)

City and County.

Md., Brooklyn.—Library.—Enoch Pratt
Free Library, Dr. Bernard C. Steiner, Li-
brarian, Mulberry St. near Cathedral St., Bal-
timore, will erect branch library No. 23;
55.6x43 ft.; brick; slate and tin roof; compo-
sition and wood floors; heating and lighting
not in general contract; cost \$27,200; Edw. H.
Glidden, Archt., 1210 American Bldg., Balti-
more. Address R. B. Mason, Contr., 308 W.
Madison St., Baltimore. (Previously noted.)

Dwellings.

Ala., Birmingham.—M. P. Northington,
Prest. Doster-Northington Drug Co., will erect
\$40,000 residence at Nizuma Ave. and 28th St.;

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

brick veneer; Smallman-Brice Constr. Co., Contr.

Ky., Winchester.—J. Smith Hays, Sr., will erect \$10,000 residence; 35x38 ft.; brick, hollow tile and frame; asbestos shingle roof; oak floors; John W. Crone & Son, Archts.; J. W. Wheeler, Contr. (Lately noted.)

Md., Brunswick.—W. S. Shannon will erect \$8000 residence, lately noted; 30x30 ft.; brick veneer; composition roof; hardwood floors; hollow fireproof tile; hot-air heat; electric lights; H. B. Funk, Archt.-Contr. (See Machinery Wanted—Water-works; Pump.)

Mo., Springfield.—Dr. Rosenberry will erect \$26,000 residence; G. F. Henschel, Contr., Aurora, Mo.

N. C., Elkin.—C. G. Armfield is erecting residence; contract let.

N. C., Elkin.—J. R. Poindexter will erect 2 residences on W. Main St.; contract let.

N. C., Reidsville.—Mrs. S. G. Jett will erect \$10,000 residence; 7 rooms and basement; frame; slate roof; hardwood floors; steam or hot air heat; plaster board; J. W. Harper, Archt., Leaksville; King Lumber Co., Contr., Charlottesville, Va.

N. C., Winston-Salem.—L. C. Bruce will erect \$7200 frame residence on S. Main St., Southside; Fogle Bros. Co., Contr.

N. C., Winston-Salem.—S. W. Morrisett, Liberty St., will erect \$9000 residence; 1 story; 6 rooms; frame; Johns-Manville asbestos shingle roofing; oak, rift pine and tile floors; probably vapor heat; electric lights; interior tile; Clarence A. Herrin, Archt.-Contr., Merchants' Bank Bldg.

Okl., Oklahoma City.—R. H. Stoddard, 433 W. 29th St., will erect \$10,000 residence; 7 rooms; brick and stucco; shingle roof; oak floors; furnace heat; Stoddard Engr. Co., Contr., 357 American Natl. Bank Bldg. (Lately noted.)

S. C., Greenville.—H. E. McDonald will erect \$12,000 brick-veneer residence at Rutherford and Earle Sts.; J. R. Owen, Contr., West Washington St.

S. C., Easley.—J. R. Wyatt will erect \$12,000 brick residence; 10 rooms; E. A. Moring, Contr.

S. C., Florence.—A. H. Bailey will erect residence on S. Gaillard St.; 2 stories; Ownahome Co., Contr.

Tex., Dallas.—Aaron Margules, 2013 Cadiz

St., will erect \$8500 residence; brick veneer; 8 rooms; red cedar shingle roof; hardwood and edge-grain fine floors; gas heat; plaster board; ornamental terra-cotta; D. D. Swindie Construction Co., Archt.-Contr. (Lately noted.)

Va., Portsmouth.—Maria De Baum will erect \$6000 bungalow in Campostella Heights; John McGraw, Contr.

Hospitals, Sanitariums, Etc.

N. C., Winston-Salem.—Dr. Chas. S. Lawrence will erect \$40,000 hospital on Oak St.; fireproof; 2 stories; 80x26x22 ft.; asbestos roof; hardwood floors; steam heat; hollow fireproof tile; plaster board; interior tile; S. J. Cooke, Archt.-Contr.

Miscellaneous.

Ark., Little Rock—Clubhouse.—Country Club, Gordon Campbell, Prest., will expend \$15,000 to remodel and enlarge clubhouse on Pulaski Heights; erect new kitchen and use roof for second-story porch; enlarge lobby and dining-room, etc.; Herman-McCain Construction Co., Contr.; Geo. Pugh, Chrmn. Bldg. Comm.

La., New Orleans—Home.—Society for Relief of Destitute Orphan Boys will erect \$140,000 home on Carrollton Ave., between Olive and Forshey Sts.; 2 stories and finished attic; pressed brick and granite; S. S. Labouisse, Archt., succeeded by Francis J. Macdonnell; J. A. Petty, Contr.

Va., Richmond—Undertaking Parlors.—L. T. Christian, 1012 E. Broad St., will erect \$60,000 undertaking parlors, Park Ave. and Boulevard; fireproof; 17x139 ft.; 3 stories; brick and terra cotta; slag roof; hot water heat; Chas. M. Robinson, Archt., Times-Dispatch Bldg., John Fox & Sons, Contrs. (Lately noted.)

Hotels.

Fla., Vero.—Geo. W. Gray will erect 21-room hotel; private bath; fireproof; stucco exterior; L. M. Newman, Contr.

Schools.

Ala., Choccolocco.—W. H. Blanton, Hubbardville, Ala., has contract to erect State school.

D. C., Washington.—District Comms., District Bldg., will erect 8-room addition to

school building; cost \$137,700; brick; slate roof; concrete floors with sleepers and edge-grain yellow pine; down-draught steam boilers for heating; electric lighting; Snowden Ashford, Municipal Archt., District Bldg.; Geo. E. Wyne, Contr., Home Life Bldg. (Lately noted.)

Mo., Leadwood.—Board of Education will erect high school; 2 stories and basement; 36x138 ft.; brick; stone trim; J. H. Felt & Co., Archts., Grand Ave., Temple Bldg., Kansas City; contract let at \$60,025. (Lately noted.)

Okl., Henryetta.—St. Michael's Catholic Church will erect high school and gymnasium to parish school; brick; 2 stories; cost \$10,000; contract let.

Okl., Muskogee.—St. Joseph's College, Brother Wilford, Principal, will erect \$20,000 gymnasium and chapel at Broadway and Virginia St.; 1 story and basement; brick and reinforced concrete; fireproof; maple doors; remodel present chapel for boys' dormitory. Address Dickmann & Niemann, Archts. and Contrs., 410 Barnes Bldg.

Stores.

Mo., Kansas City.—Goudie Bros., 804-5 Walnut St., will remodel department store; maple floors; lighting, \$2200; use present heating plant; repair elevator, etc.; R. H. Samman, Archt., 519 Reserve Bank Bldg.; Jas. E. Taylor, Contr., 308 Reliance Bldg. (Lately noted.)

Tex., El Paso.—Maj. and Mrs. W. J. Fewell will erect \$25,000 building at Montana and Piedmont Sts.; 140x100 ft.; 6 stories; Mayfield Building and Improvement Co., Contr.

Warehouses.

Fla., Miami.—Railey-Milam Hardware Co. will erect \$15,000 warehouse; 50x15 ft.; reinforced concrete and cement blocks; felt roof; wood floors; electric lights; Wolf Construction Co., Contr., on percentage basis. (Lately noted under Stores.)

Mo., St. Louis.—Liberty Bell Oil Co., Chas. Asthoff, Prest., 600 S. Vendeventer Ave., will erect \$20,000 warehouse and shed; 1 story; day labor; Henry Schaumberg, Jr., Archt., 2631 Connecticut St.; Chas. Gescheidt, 156 Alive Ave., Contr. for carpenter work. (Lately incorrectly noted at Mo., Kansas City.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Asphalt Plant.—Roy C. Whayne Supply Co., 608 W. Jefferson St., Louisville, Ky.—1250-yd. capacity Cummer portable asphalt plant; first-class condition.

Boilers.—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Dealers' prices on 35, 40 and 50 H. P. return-tubular boilers, safe for 120 and not less than 100 lbs. steam pressure; good second-hand condition.

Boiler.—Oliver Carter, Box 1191, Wilmington, N. C.—40 to 50 H. P. open-bottom firebox boiler on wheels, complete with fittings.

Boilers.—Gulf Machinery & Investment Co., New Orleans, La.—Three 72-in. by 18-ft. boilers, 150 lbs. steam pressure, complete with stack and settings for Dutch ovens; prefer steel casings; good condition.

Boilers.—S. C. Ferguson, Mgr. Bailey-Ferguson Coal Co., Prestonsburg, Ky.—Boilers for 1000-ton capacity coal mine.

Boiler and Radiators.—J. F. Tesh, Box 338, Winston-Salem, N. C.—Second-hand steam furnace boiler and radiators.

Boiler Tubes, etc.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids until Mch. 8 to deliver boiler tubes and back-saw blades to Navy-yard at Charleston, S. C.; information on file or with Supply Officer, Charleston.

Brick.—Rev. W. A. Myres, Live Oak, Fla.—Prices on rough and face brick for church; 60x95 ft.

Bricks (Clay).—Home Builders, Ed. L. Hainz, Sebring, Fla.—Prices on 100,000 to 200,000 clay bricks.

Bridge Construction.—Rapides Parish Police Jury, Alexandria, La.—Bids until Mch. 8 to build culverts on section B of Glenmora-Westport Rd.; 9 mi.; plans, etc., with Ira W. Sylvester, Parish Engr.

Bridge Construction.—Tom Green County Comms., Charles T. Paul, County Judge, San Angelo, Tex.—Bids opened Feb. 28 to improve Lone Wolf bridge in Tom Green County; 164,164 lbs. reinforcing steel; plans, etc., with J. E. Beavers, County Engr., San Angelo, and State Highway Dept., State Office Bldg., Austin, Tex.

Bridge Construction.—Virginia State Highway Coms., G. P. Coleman, Commr., 116 S. 3d St., Richmond, Va.—Bids until Mch. 15 to build reinforced concrete bridge over Cook's Creek and 2 steel and reinforced concrete bridges over Glade Creek; Virginia Project No. 104; plans, etc., on file at Richmond and with W. F. Hobart, 104 N. 8th St., Richmond.

Bridge Construction.—Chatham County Comms., A. T. Ward, Chrmn., Pittsboro, N.

C.—Bids until Mch. 14 to build steel truss bridge over Rocky River between Pittsboro and Sanford; 120-ft. steel truss span on concrete piers; plans, etc., with L. V. Edwards, Consultant Engr., Winston-Salem, N. C.

Bridge Construction.—Lafayette County Supvrs., W. M. Woodward, Clk., Oxford, Miss.—Bids until Mch. 8 to build 32 and 18-ft. bridges in Beat 1 and 50-ft. bridge across Conasauga River; plans, etc., with Chancery Clerk.

Bridge Construction.—Georgetown County, M. S. Bellune, County Supvr., Georgetown, S. C.—Bids until Mch. 8 to build concrete bridges on Georgetown-Andrews Rd., between Georgetown and Station 550-00, in Georgetown County; consisting of 4 reinforced concrete bridges; 22,631 lbs. reinforcing steel; plans, etc., on file at Georgetown, with W. S. Lewis, Div. Engr., Florence, S. C., and State Highway Engr., Columbia, S. C.

Building Materials.—R. O. Lindsay, Bedford, Va.—Data and prices on building materials.

Building Materials.—R. E. Knox, Weatherford, Tex.—Prices on building materials and supplies for garage.

Building Material.—T. J. Gore, 511 Dock St., Wilmington, N. C.—Prices on building

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

March 3, 1921.

MANUFACTURERS RECORD.

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material for \$55,000 church, including lumber, hollow tile, red pressed brick, slate roofing, common brick, sash and doors, millwork, tile for cloisters.

Building Material.—Huntington Housing Corp., 910 Third Ave., Huntington, W. Va.—Prices on building material for dwellings.

Building Material.—Willis Irvin, 1404 Loring Bldg., Augusta, Ga.—Prices on building material for 5 frame dwellings of cheaper type.

Cars (Mine).—S. C. Ferguson, Mgr. Bailey-Ferguson Coal Co., Prestonsburg, Ky.—Cars for 1000-ton capacity coal mine.

Celling.—Rev. W. A. Myres, Live Oak, Fla.—Prices on metal ceiling for church; 60x95 ft.

Celluloid Sheets.—J. Hod Williams, 5 N. Conception St., Mobile, Ala.—Celluloid sheets of $\frac{1}{2}$ to $\frac{3}{4}$ -in. thickness in various colors.

Charcoal Equipment.—W. C. Perkins, 309 Walton St., Houston, Tex.—Names and addresses mfrs. of equipment for burning pine wood into charcoal.

Church Equipment.—T. J. Gore, 511 Dock St., Wilmington, N. C.—Prices on tables for Sunday-school rooms.

Compressors (Air).—J. G. White, Grover, N. C.—Prices and catalogs on small air compressors, single cylinder, with loose pulley attached.

Concrete Floors, etc.—Chief of Second Dist., Construction Service, Q. M. C., Camp Travis, Tex.—Bids until Mch. 22 to construct concrete floors in 4 hangars at Kelly Field, San Antonio, Tex.; information on application.

Construction Equipment.—Pidgeon-Harper Co., Bunnell, Fla.—Prices on 600 ft. $\frac{3}{4}$ -in. cable, six 2-yd. dump cars, 24-in. or 25-in. gauge; one steam or gas shovel; half-yard dipper, prefer mounted on caterpillar base; one friction belt-driven hoist, 4 switches and frogs, 24-in. or 25-in. gauge; one air compressor and 2 Jap hammers; 2 sets of steel, 2 to 8 ft.; one dolly to sharpen steel.

Conveyor.—R. P. Johnson, Wytheville, Va.—Second-hand slab or refuse conveyor for 15,000 to 20,000 ft. daily capacity sawmill.

Copper Oxide.—Protective Products Co., Box 938, New Orleans, La.—Names and addresses mfrs. of copper oxide.

Dish Washing Machines.—J. B. Spencer, care of A. P. Spencer, 7th St., W., Gainesville, Fla.—Names and addresses mfrs. of electric or other satisfactory dish washing machine for family use.

Ditching Machines.—Robt. H. Roesch, City Clk., Bradenton, Fla.—Prices and catalogs on ditching machines.

Drainage.—Victory Drainage Dist. Supys. of Scotland County, Memphis, Mo.—Bids until Feb. 26 to construct drainage system; main ditch, 54,000 ft. long, 10 ft. wide; 393,700 cu. yds. excavation.

Dragline.—Clyde C. Dalley, Mgr. National Brick Co., 218 Bond Bldg., Washington, D. C.—Dragline for sand.

Electric Fixtures.—T. J. Gore, 511 Dock St., Wilmington, N. C.—Prices on electric fixtures for church.

Electrical Supplies, etc.—R. J. Jones & Co., 220 Broadway, New York, and Columbia, S. A.—To represent mfrs. of electrical supplies, general hardware, novelties, household utensils, enamelware, dry goods and hosieriy.

Elevators.—Southern Road Machinery Co., 1531 First Ave., Birmingham, Ala.—To represent mfrs. of contractors' material elevators.

Elevator (Electric Freight).—Treasury Department, Supervising Archt.'s Office, Washington, D. C.—Bids until Mch. 22 to install electric freight elevator in United States post-office annex, Brooklyn, N. Y.; plans on file with Ch. Engr., Room 731 Custom-house Bldg., New York.

Engines.—S. C. Ferguson, Mgr. Bailey-

Ferguson Coal Co., Prestonsburg, Ky.—Engines for 1000-ton capacity coal mine.

Engines.—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Catalogs and prices on all sizes 4-cycle marine engines; jobbers' prices on 20 H. P. 4-cycle marine engine and any other size; both new and second-hand; lowest freight rate to Knoxville.

Excavation.—U. S. Engineer Office, Wilmington, Del.—Bids until Mch. 23 for excavating inland waterway from Delaware River to Chesapeake Bay; information on application.

Flour.—Allalouf & Moche, Rue Veria, 10-B, P. No. 12, Salonique, Greece.—To represent flour millers.

Flooring.—Wm. H. Box, 516 Commerce St., Philadelphia, Pa.—Names and addresses mfrs. of wood blocks for factory floors.

Filter Plant.—City of Gastonia, N. C., R. C. Cherry, Mayor.—Bids until Mch. 15 to construct mechanical filtration plant; plans, etc., on file with City Mgr. or from Wm. M. Platt, Engr., Durham, N. C.

Furniture.—State Board of Control, S. B. Cowell, Chrnn., Austin, Tex.—Bids until Mch. 21 for hospital equipment, including furniture, etc. (See Hospital Equipment.)

Generator.—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Dealers' prices on second-hand or rebuilt 40 K. W. belted generator, 250 volts, compounded D. C.; immediate delivery.

Generator.—Dist. Commr., Room 509 Dist. Bldg., Washington, D. C.—Bids until Mch. 21 to furnish electric generator for use at garbage reduction plant; plans with purchasing officer, Room 320 Dist. Bldg.

Generator.—Norton-Broadway Machinery Co., 236 Broadway, Cincinnati, O.—75 to 125 K. W. D. C. 240 volt, belted generator to connect to a 16x16 McEwen center crank automobile engine.

Glass Containers.—Blue Bird Products Co., 3402 Holmes St., Dallas, Tex.—Correspond with mfrs. of glass containers for peanut butter.

Glass (Optical), etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids until Mch. 8 to deliver optical glass and washing crystals to Navy-yard, Washington.

Glass Plant.—W. G. Carroll, Box 611, West Palm Beach, Fla.—Data and prices on glass manufacture.

Hoists.—Bundy Coal Co., Johnson's Mill, Va.—Steam hoists.

Hospital Equipment.—State Board of Control, S. B. Cowell, Chrnn., Austin, Tex.—Bids until Mch. 21 for complete equipment of hospital building at State Confederate Home, Austin, to include furniture, mattresses, beds, linens, sterilizers, kitchen equipment, etc.; plans, specifications and information from C. H. Page & Bro., Archts., Austin.

Hoops (Galvanized Iron).—Crystal Ice Co., Washington, N. C.—Names and addresses mfrs. of galvanized iron hoops to rehoop ice cream tubs.

Hydrating Machinery.—Will H. Fox, Graysville, Tenn.—Names and addresses mfrs. of hydrating machinery.

Knitting Machinery.—Hickory Hosiery Mills, H. d'Anna, Seey, and Gen. Mgr., Hickory, N. C.—176-200-needle, $\frac{3}{8}$ or $\frac{3}{4}$ -in. machines; in good order.

Kitchen Equipment.—State Board of Control, S. B. Cowell, Chrnn., Austin, Tex.—Bids until Mch. 21 for kitchen equipment at hospital of State Confederate Home. (See Hospital Equipment.)

Lathe (Engine).—John D. Bond, Chrnn., City Comrs., Jacksonville, Fla.—Bids until Mch. 4 to furnish heavy-duty quick-change engine lathe, 25-in. swing, 12 ft. between centers, with large and small face plates.

compound and follower rest, 2 steel centers and center post, double-friction countershaft; f. o. b. Jacksonville; R. N. Ellis, Purchasing Agent, City Hall.

Labels.—Protective Co., Box 938, New Orleans, La.—Names and addresses printers who specialize on labels.

Lathe.—Noel Mfg. Co., 119 E. Cherry St., Cushing, Okla.—Small lathe.

Levee Construction.—Town of Freeport, Tex., E. C. King, Clk.—Invites bids for enlarging present levee system, totaling 425,000 yds. embankment.

Lime Plant.—Will H. Fox, Graysville, Tenn. Data and prices on establishing lime plant.

Locomotive.—Southern Locomotive & Equipment Co., 1002 Empire Bldg., Atlanta, Ga.—Six-driver saddle-tank locomotive, rigid wheel base not over 9 ft., weighing in working order approximately 60 tons; 175 lbs. steam pressure; first-class condition.

Metal Working Machines.—R. N. Balsara & Co., 27 Trinity St., P. O. No. 2, Bombay, India.—To represent mfrs. of rolling mills and wire-drawing machines used by jewelers and goldsmiths; size of rolls about 5x3 in.

Mill (Open Door).—G. J. Adams, 8 Wall St., Norwalk, Conn.—Sturtevant open-door mill.

Millwork.—T. J. Gore, 511 Dock St., Wilmington, N. C.—Prices on sash and doors and other millwork for \$55,000 church. (See Building Material.)

Mining Machinery.—S. C. Ferguson, Mgr. Bailey-Ferguson Coal Co., Prestonsburg, Ky.—Mining machinery, including screens, tipplers, fans, etc., for 1000-ton capacity coal mine.

Motors.—S. C. Ferguson, Mgr. Bailey-Ferguson Coal Co., Prestonsburg, Ky.—Motors for 1000-ton capacity coal mine.

Motors (Gasoline).—Leland J. Henderson, Columbus, Ga.—Names and addresses mfrs. of gasoline motors or other motive power to use on railroad tracks between Columbus and Camp Bennington.

Nails.—Crystal Ice Co., Washington, N. C.—Names and addresses mfrs. of steel-wire nails.

Oils, etc.—Treasury Dept., Bureau of Engraving and Printing, Washington, D. C.—Bids invited to furnish dextrine, oils, textiles, engravers' supplies and dry colors, samples not later than Apr. 18; samples not later than Apr. 11 for paper-box blanks, paper and check paper. Blank forms and information for several schedules with Jas. L. Wilmett, Director.

Paving.—City of Cape Girardeau, Mo.—Bids about Mch. 10, to pave Main, Broadway and other streets; concrete, brick and macadam; \$60,000; E. L. Sailer, Engr.

Paving.—R. G. Henry, City Mgr., Hickory, N. C.—Bids until Mch. 29 to construct 40,000 yds. paving and sidewalks; \$175,000 available; Taplin & Perkins, Engrs., High Point, N. C.

Paving.—City, M. E. Newsom, Mayor, Durham, N. C.—Bids until Mch. 8 to construct 5000 to 15,000 sq. yds. concrete sidewalk; plans, etc., with H. W. Kueffner, City Engr.

Paving.—City of Quanah, Tex., M. M. Hankins, Mayor, Hardin County, Quanah, Tex.—Bids until Mch. 8 to construct 14,300 sq. yds. paving; 5600 lin. ft. combination curb and gutter; 1900 sq. ft. 6 in. concrete alley aprons, etc.; plans, etc., with Henry Exall Elrod Co., Constl. Engr., Dallas, Tex.

Paving.—D. W. Gatlin, Mayor, Madisonville, Ky.—Bids until Mch. 5 to construct 16,966 sq. yds. Kentucky rock asphalt pavement with macadam base; plans, etc., on application.

Paving.—D. H. Stephenson, Mayor, Caledon, W. Va.—Bids until Mch. 18 to pave streets; 6000 sq. yds. concrete pavement; plans, etc. on file.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Paving.—Marvin Post, City Secy., Haskell, Tex.—Bids until Mch. 3 to construct 15,000 sq. yds. street pavement; 16000 lin. ft. combination curb and gutter; 26,000 sq. ft. sidewalk, etc.; plans, etc., with R. G. Carraway Co., Engr., Childress, Tex.

Paving.—L. T. Newlon, City Clk., Weleetka, Okla.—Bids until Mch. 16 to pave streets; 8300 yds. brick pavement; \$51,000 available; V. V. Long & Co., Engrs., 1300 Colcord Bldg., Oklahoma City.

Paving.—City, L. A. Edwards, City Clk., St. Albans, W. Va.—Bids until Mch. 24 to pave streets; 19,700 sq. yds. monolithic, brick construction, concrete base paving; 9596 lin. ft. curb and gutter; plans, etc., with City Clk. and Oliver & Maupin, Engrs., Huntington, W. Va.

Paving.—City, J. W. Motte, Director Publ. Works, Savannah, Ga.—Bids until Mch. 9 to pave Jones St., Louisville, Ogeechee roads, Lathrop Ave., Bull, Henry Sts. and other avenues; 50,658 sq. yds.; plans on file.

Paving.—City, Wade M. Jones, Mayor, La Compte, La.—Bids about Mch. 15 to construct 18,310 sq. ft. sidewalks and 1020 lin. ft. combined curb and gutter; J. L. White, Engr.

Paving.—City, L. L. Woollen, Mayor, Cleveland, Tenn.—Bids in Mch. for 3 mi. street paving; \$200,000 available; S. D. Newton, Engr.

Paving.—City of Charleston, W. Va., Bonner H. Hill, City Mgr.—Bids until Mch. 5 to pave streets; 35,000 sq. yds. paving; Ernest Bruce, City Engr.

Paving.—City, W. E. Beach, Mayor, Clarksville, Tenn.—Bids until Mch. 24 to grade and pave streets with asphaltic concrete; 50,000 sq. yds. pavement; 8000 ft. concrete curb and gutter; 8000 ft. sewers and drains; plans on file with S. R. Alexander, City Engr., Clarksville, and Ludlow Engrs., Winston-Salem, N. C.

Paving.—City, J. L. Short, City Secy., Denison, Tex.—Bids opened Feb. 28 to pave 40,000 sq. yds. concrete pavement, etc.; specifications with City Engr.

Paving.—City Commsn., John S. Bond, Chrmn., Jacksonville, Fla.—Bids until Mch. 18 to pave Perry St.; 4978 sq. yds. asphalt block pavement $\frac{1}{2}$ in. thick on sand base, with granite curb; plans, etc., with City Recorder and Engr. Dept. of City Commsn.

Paper Plant.—Ira S. Pitts, Westminster, S. C.—Prices and information on mfrs. of paper from wood.

Pipe.—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Dealers' prices on 1800 ft. 2-in. black pipe, 1800 ft. 1-in. black pipe; good condition; immediate delivery; nearest railroad point to Knoxville.

Potato Peeling Machines, etc.—Southern Crispette Co., 1507 S. Tyron St., Charlotte, N. C.—Data and prices on potato-peeling and slicing machy. for mfrs. potato chips.

Presses.—Noel Mfg. Co., 119 E. Cherry St., Cushing, Okla.—Drill presses.

Pump.—W. S. Shannon, Brunswick, Md.—Prices on automatic electric pumping system. (See Water-works.)

Pump (Vacuum).—G. J. Adams, 8 Wall St., Norwalk, Conn.—12x22x24-in. wet vacuum pump.

Radiators.—See Boiler and Radiators.

Rails, etc.—Bundy Coal Co., Johnson's Mill, Va.—Steel rails and switches.

Rails, etc.—Dept. of Public Improvements, Wm. F. Broening, Prest., Board of Awards, Baltimore, Md.—Bids until Mch. 9 to furnish 35 $\frac{1}{2}$ tons 100-lb. Asce rails with necessary splice bars, bolts and tie plates; H. G. Perring, Ch. Engr.

Refrigerating System.—S. O. Chadwick, Mgr. White House, Gainesville, Fla.—Data and prices on refrigerating system, 1-ton daily capacity.

Road Building Machinery.—Southern Road Machinery Co., 1531 First Ave., Birmingham, Ala.—To represent mfrs. of steam shovels, drag lines, road rollers and graders, street-cleaning machy.

Road Construction.—Okeechobee County Commrs., W. W. Potter, Chrmn., Okeechobee, Fla.—Bids until Feb. 28 to construct 18 mi. State Road No. 107, between Kissimmee River and St. Lucie County line; plans, etc., with C. E. Simmons, Clk.

Road Construction.—Robert C. Terrell, State Engr. State Highway Dept., Oklahoma City, Okla.—Bids until Mch. 1 to construct 7.19 mi. cement concrete, Topeka top on concrete base or other pavement; Federal-aid Project No. 42, Osage County; \$250,000; plans, etc., on file at Oklahoma City, and with County Clk., Pawhuska, Okla.

Road Construction.—Comsn. Roads and Bridges, New Kinn Bldg., Portsmith, Va.—Bids until Mch. 5 to construct Portland Cement concrete roads on various streets or avenues in Ocean View, Tanners Creek Dist., Norfolk County; plans, etc., with R. B. Preston, County Engr.

Road Construction.—Robert C. Terrell, State Engr. State Highway Dept., Oklahoma City, Okla.—Bids until Mch. 1 to construct 15 mi. gravel or water-bound macadam road; Federal-aid Project No. 5, Bryan County; \$200,000; 65.42 mi. gravel or water-bound macadam road divided into 8 sections, and bids received on each separately; Federal-aid Project No. 41; \$1,000,000; plans, etc., on file; Henry Wood, Commr. Highways.

Road Construction.—Robert C. Terrell, State Engr. State Highway Dept., Oklahoma City, Okla.—Bids until Mch. 1 to construct 35.57 mi. gravel or water-bound macadam road divided into 4 sections, and bids received on each separately; Federal-aid Project No. 47, Johnston County; \$500,000; plans, etc., on file at Oklahoma City, and with County Clk., Altus, Okla.

Road Construction.—Robert C. Terrell, State Engr. State Highway Dept., Oklahoma City, Okla.—Bids until Mch. 1 to construct 1 mi. cement concrete, Topeka top on concrete base or other pavement; Federal-aid Project No. 44, Jackson County; \$50,000; plans, etc., on file at Oklahoma City, and with County Clk., Hartville, Okla.

Road Construction.—Ashe County Board Good Roads Commsr., J. F. Scott, Chrmn., Jefferson, N. C.—Bids until Mch. 8 to construct highway at or near River Bridge on Jefferson-Wilksboro highway to Laurel Springs; 8 mi.; plans, etc., with J. G. Bright, County Engr.

Road Construction.—Virginia State Highway Commsn., G. P. Coleman, Commr., 116 S. 3d St., Richmond, Va.—Bids until Mch. 15 to construct 9.25 mi. bituminous macadam road on State Road No. 10 in Roanoke and Botetourt counties, between Roanoke and Blue Ridge Springs; Virginia Project No. 104; plans, etc., on file at Richmond, and with G. W. Counter, Engr., Donohoo Bldg.

Road Construction.—Permanent Road Board, Justice Precinct No. 1, John Sutherland, County Auditor and Secy. Board, Martin, Tex.—Bids until Mch. 10 to improve 46 mi. road in Precinct No. 1; plans, etc., with G. W. Counter, Engr., Donohoo Bldg.

Road Construction.—Randolph County Commsr., Huntsville, Mo.—Bids until Mch. 10 to construct roads; \$590,000 available; Fuller & Beard, Engrs., St. Louis, Mo.

Road Construction.—Chatham County Commissioners, A. T. Ward, Chrmn., Pittsboro, N. C.—Bids until Mch. 14 to construct county highway from Cape Fear Township line at Beaver Creek Station; plans, etc., with L. V. Edwards, Constl. Engr., Masonic Temple, Winston-Salem, N. C., and Register of Deeds, Pittsboro.

Road Construction.—Henrico County Supervisors, Richmond, Va.—Bids until Mch. 1 to construct 1 mi. Three-Chopt road, County Road No. 1, 2.62 mi.; Broad St. road, County Road No. 3, and 1.46 mi. 2d St. road, County Road No. 14; plans, etc., with County Clk. and State Highway Commr., 116 S. 3d St.

Road Construction.—Springfield Road Dist.

Road Construction.—Rapides Parish Police Jury, J. F. Ball, Prest., Alexandria, La.—Bids until Mch. 8 to grade 9 mi. Glenmor-Westport Rd.; plans, etc., with Ira W. Sylvester, Parish Engr.

Road Construction.—Durham County Commissioners, Durham, N. C.—Bids until Mch. 8 to construct South Boulevard, Sections 1 and 2, connecting New Hope Valley Rd. and Baxter St. and Chapel Hill Rd. and New Hope Valley Rds.; .85 mi.; plans, etc., with F. E. Schenepf, County Engr.

Road Construction.—State Highway Board, Alexander W. Graham, Engr., Jefferson City, Mo.—Bids until Mch. 17, to construct 7.42 mi. State road, Project 88, Section A, including grading, constructing culverts, bridges, etc.; \$19,527.01; 9.73 mi. State road, Project 47, Section A, including grading, constructing culverts, bridges, etc.; \$39,650.24; plans, etc., on file at Jefferson City, with County Clk., Stockton, and H. P. Moberly, Div. Engr. Woodruff Bldg., Springfield, Mo.

Road Construction.—Crittenden County Commsr. Road Improvement Dists. 7 and 9, Marion, Ark.—Bids until Mch. 15 to construct 23 mi. gravel roads in sections as follows: Nos. 1 and 2 at Turrell, 8.44 and 6.08 mi.; No. 3 at Clarksville, 6.32 mi., No. 4 at James Mill, 2.32 mi.; plans, etc., with Morgan Engineering Co., Memphis, Tenn.

Road Construction.—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Mch. 15 to construct 1.50 mi. State Highway from State road near Willards toward Powellville; concrete, Wicomico County, Contract WI-16; plans, etc., on file.

Road Construction.—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Mch. 15 to construct 1.50 mi. State Highway from end Contract P-16A toward Lanham; concrete, Prince George County, Contract P-22; 2 mi. State Highway from end Contract P-17 along Central Ave. towards Halls Station; Prince Georges County, Contract P-23; plans, etc., on file.

Road Construction.—State Roads Comsn., 601 Garrett Bldg., Baltimore, Md.—Bids until Mch. 15 to construct 2.55 mi. State Highway from Grove to Fowling Creek; concrete Caroline County, Contract CO-24; plans, etc., on file.

Road Construction.—State Highway Board, Alexander W. Graham, Engr., Jefferson City, Mo.—Bids until Mch. 18 to construct 7.46 mi. State road, Project No. 2026, including grading and constructing culverts and wooden guard rail; \$33,698.00; plans, etc., with County Clk., Hartsville; H. P. Moberly, Div. Engr. Woodruff Bldg., Springfield, Mo., and State Highway Dept., Jefferson City, Mo.

Road Construction.—Permanent Road Board, Justice Precinct No. 1, John Sutherland, County Auditor and Secy. Board, Martin, Tex.—Bids until Mch. 10 to improve 46 mi. road in Precinct No. 1; plans, etc., with G. W. Counter, Engr., Donohoo Bldg.

Road Construction.—Randolph County Commsr., Huntsville, Mo.—Bids until Mch. 10 to construct roads; \$590,000 available; Fuller & Beard, Engrs., St. Louis, Mo.

Road Construction.—Chatham County Commissioners, A. T. Ward, Chrmn., Pittsboro, N. C.—Bids until Mch. 14 to construct county highway from Cape Fear Township line at Beaver Creek Station; plans, etc., with L. V. Edwards, Constl. Engr., Masonic Temple, Winston-Salem, N. C., and Register of Deeds, Pittsboro.

Road Construction.—Henrico County Supervisors, Richmond, Va.—Bids until Mch. 1 to construct 1 mi. Three-Chopt road, County Road No. 1, 2.62 mi.; Broad St. road, County Road No. 3, and 1.46 mi. 2d St. road, County Road No. 14; plans, etc., with County Clk. and State Highway Commr., 116 S. 3d St.

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Springfield, Mo.—Bids until Mch. 7 to construct State Road Project 162, including grading, constructing culverts and gravel pavement 16 ft. wide on State road from Christian County line; \$47,271.92; plans, etc., with H. P. Moberly, Div. Engr., Woodruff Bldg.; Fred. W. Johnson, Engr.

Roofing.—Rev. W. A. Myres, Live Oak, Fla. Prices on tile roofing for church; 60x95 ft.

Roofing.—T. J. Gore, 511 Dock St., Wilmington, N. C.—Prices on slate roofing. (See Building Material.)

Saw (Portable).—Southern Road Machinery Co., 1531 First Ave., Birmingham, Ala.—To represent mfrs. of contractors' portable saw outfits.

Seating.—T. J. Gore, 511 Dock St., Wilmington, N. C.—Prices on church pews.

Sewers.—Washington Suburban Sanitary Coms., Wm. T. S. Curtis, Evans Bldg., Washington, D. C.—Bids until Mch. 14 to construct 22,000 ft. 6 to 15-in. sewers with house connections, manholes, etc.; plans, etc., from Robt. B. Morse, Ch. Engr., Armory Bldg., Hyattsville, Md., on and after Feb. 28.

Sewers.—City of Clarksville, Tenn., W. E. Beach, Mayor.—Bids until Mch. 24 to construct 8000 ft. sewers and drains, 8 to 15 in. diam.; plans, etc., with S. R. Alexander, City Engr., and Ludlow Engrs., Winston-Salem, N. C.

Sewers.—City of Graham, N. C., R. L. Holmes, Mayor.—Bids until Mch. 30 to construct 13.8 mi. 8 to 18-in. vitrified pipe sewers with manholes, flush tanks and appurtenances; also 2 sewage-pumping stations with 0.6 mi. of 4 and 6-in. cast-iron pipe; plans, etc., with Norcross & Keis, Engrs., 1625 Candler Bldg., Atlanta, Ga., and with Town Clk., Graham.

Sewers.—City of Carthage, Mo., James Burk, City Clk.—Bids until Apr. 1 to construct sewers in District No. 4; Frank B. Newton, City Engr.

Sewers.—City of Durham, N. C., M. E. Newsom, Mayor.—Bids until Mch. 8 to construct 10,000 ft. 8-in. sanitary sewers and 4300 ft. 6-in. sewers; plans, etc., from H. W. Kueffner, City Engr.

Sewers.—City of Knoxville, Tenn., J. B. McCalla, Commr. Streets and Public Improvements.—Bids until Mch. 22 to construct 8000 lin. ft. 15 to 24-in. sanitary sewers from Fifth Ave. bridge to Oakwood; plans, etc., on file; J. L. Greer, Recorder.

Sewers.—City of Pensacola, Fla., L. E. Heinberg, City Clk.—Bids until Mch. 14 to relay sanitary sewers in De Villiers and Garden Sts.; construct manholes; plans, etc., from Frank Jarrett, City Engr.

Sewer Pumping Station.—City of Baltimore, Mayor Wm. F. Broening, Prest., Board of Awards.—Bids until Mch. 9 to construct auxiliary pumping station No. 2 (Sanitary Contract No. 178) at Sewage Disposal Works, Back River; plans, etc., from A. E. Christhill, Highway Engr.

Shovel (Gasoline).—Claude C. Dalley, Mgr. National Brick Co., 218 Bond Bldg., Washington, D. C.—Gasoline shovel.

Signs (Highway).—J. A. Roundtree, Director Gen. Bankhead National Highway Assn., Box 281, Greensboro, N. C.—To contract for permanent signs for marking highway from Washington to San Diego, Cal., 3600 mi.

Springs (Coil).—Johnson Mfg. Co., Danville, Va.—To correspond with mfrs. of coil springs.

Stack (Smoke).—G. J. Adams, 8 Wall St., Norwalk, Conn.—80-ft. by 54 or 60-in. smoke-stack.

Stamping Machinery, etc.—Liberty Stamping & Mfg. Co., W. P. Neville, Prest., 401 Book Bldg., Detroit, Mich.—Machinery and tools for sheet metal stamping.

Steel (Tool).—Johnson Mfg. Co., Danville, Va.—To correspond with mfrs. of tool steel cut to order.

Sterilizer.—State Board of Control, S. B. Cowell, Chrmn., Austin, Tex.—Bids until Mch. 21 for sterilizer. (See Hospital Equipment.)

Still (Vacuum).—G. J. Adams, 8 Wall St., Norwalk, Conn.—200-gal. copper vacuum still.

Tables.—T. J. Gore, 511 Dock St., Wilmington, N. C.—Prices on tables for Sunday-school rooms. (See Church Equipment.)

Tables (Pool), etc.—White Furniture Co., Mehane, N. C.—Pool tables and games for factory clubrooms.

Tank (Oil).—Hammer Lumber Co., Wilmington, N. C.—Second-hand 6000 or 8000-gal. tank for storing fuel oil.

Trailer.—See Truck, etc.

Tank (Oil).—Carolina Machinery Co., F. M. Moise, Secy., Sumter, S. C.—Second-hand 6000 or 8000-gal. tank for storing fuel oil.

Ties (Railroad).—Dept. of Public Improvements, Wm. F. Broening, Prest., Board of Awards, Baltimore, Md.—Bids until Mch. 9 to furnish railroad ties for McComas St. extension; H. G. Perrin, Ch. Engr.

Truck, etc.—Geo. B. Todd, 421 Union St., Norfolk, Va.—Motor-driven truck used to handle freight on wharf, with trailer to handle 3 hogheads at one time.

Ventilators (Window).—F. M. Dillon, Division Mgr., Box 414, Raleigh, N. C.—Names and addresses mfrs. of portable window ventilators.

Wheels (Water).—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Dealers' prices on second-hand or rebuilt water-wheels

that will develop from 15 to 25 H. P. under 10-ft. head.

Water-works.—W. S. Shannon, Brunswick, Md.—Prices on automatic electric pumping system with storage tank capacity of about 5000 gals., and pump to have capacity 250 gals.; well 68 ft. deep, inside casing 5 in., chain-driven pump.

Water-works.—City of Mineral Wells, Tex., K. M. Brayer, Mayor.—Bids until Mch. 1 to complete Lake Mineral Wells reservoir; lay 25,500 ft. 10 and 12-in. pipe line; construct reinforced concrete and one brick pump station; install electrically-driven pumps and motors, 20,000 ft. transmission line, filter units, valves, etc.; plans, etc., from N. W. McLendon, Engr.

Woodworking Machinery.—Geo. A. Poole, Easton, Md.—Bids until Mch. 10; woodworking machinery, including band saw, planer, lathe, mortising machine, pointer, etc.

Railroad Construction

Railways.

Tex., Austin.—Missouri, Kansas & Texas Railway Co. is reported locating route for contemplated line from Austin to San Marcos, Tex., 31 mi.; T. Ringer, Dallas, Tex., is Ch. Engr.

Street Railways.

N. C., Goldsboro.—Goldsboro Street Railway Co., W. E. Stroud, Secy and Treas., reported will build extension to cost \$40,000.

Tex., Houston.—Houston Electric Co. has sold \$250,000 of 8 per cent notes to construct some double tracking; W. O. Wood is Mgr.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Mobile Man Buys a Georgia Railroad.

Louis H. Metzger of Mobile has announced the purchase of the Ludowici & Collins Railroad, running from Ludowici to Collins, Ga. Confirmation of the purchase was given by Judge Shepard of Claxton, Ga. The Ludowici & Collins Railroad connects the Atlantic Coast Line Railroad with the Seaboard Air Line, extending a distance of 46 miles. The sale was advertised recently and bids submitted. The Mobile firm was the highest bidder. Mr. Metzger stated he had already disposed of 50 per cent of the road as a going concern. He is planning to sell the remainder in a similar manner.

Change of Name.

The Byers Machine Co. is the new name adopted by the John F. Byers Machine Co. of Ravenna, O., manufacturers of auto cranes, etc. The change has just been announced.

Sales Manager Appointed.

Robert C. Weller has been appointed general sales manager of the Lakewood Engineering Co., with headquarters at Cleveland, and he is in full charge of sales work. Carlton R. Dodge is also appointed Western sales manager for the company, with headquarters at 1215 Lumber Exchange Building, Chicago. The appointments are now in effect.

Trade Literature.

How to Build "Asphalt Macadam" Roads.

Featured by a short but complete presentation of its entire subject, the new booklet of

the asphalt sales department of the Texas Company, entitled "Texaco Asphalt Macadam," is now ready for distribution. The booklet tells how to construct Texaco asphalt macadam roads, starting with the foundation and thoroughly discussing the process step by step thereon up to the finished pavement. Cross-sections are clearly drawn to illustrate the work as it progresses, and photographs of actual construction add to the thoroughness of the publication. A free copy of this booklet may be had by addressing the Texas Company, Asphalt Sales Department, 17 Battery Place, New York city.

Financial News

New Financial Corporations.

Fla., Jacksonville.—Home and Land Building & Loan Co., capital \$250,000, organized with H. B. Shaw, Prest.; W. E. Terry, V.-P.; E. I. Hickson, Secy.-Treas.

Fla., Tampa.—Southland Finance Co., capital \$50,000, organized with R. H. Wester, Prest.; F. L. Greenfield, V.-P.; J. B. Owens, Secy.-Treas. (Lately noted.)

Ga., Butler.—Citizens Bank of Butler, capital \$15,000, incptd. with R. A. Hinton, R. A. Scandrett, F. R. Purvis.

Ky., Freeburn.—Merchants & Miners Bank, capital \$16,000, incptd. with E. L. Bailey, W. A. Dotson, C. M. Kennedy.

Md., Baltimore.—Hopkins Place Building

& Loan Assn. of Baltimore City, 419 Hanover St., capital \$250,000, incptd. with Louis Setten, Julia Setten, Robt. Kanter.

Mo., Kansas City.—Central Trust Co., capital \$250,000 and surplus \$25,000, organized with M. B. Greer, Prest.; Clyde Faught, V.-P.; T. K. Elliott, Cashr.

Mo., Kansas City.—Southwest Commerce Loan & Realty Co., capital \$200,000, organized.

Mo., St. Louis.—Citizens Loan Co., capital \$500,000, organized with W. E. Singleton, R. King Kaufman, J. E. Shelby.

N. C., Robinsville.—Graham County Bank chartered with R. L. Phillips, Robbinsville; E. A. Davidson, R. R. Rogers; both Murphy, N. C.

N. C., Wilson.—Commercial Bank, capital \$50,000, incptd. with J. D. Reid.

S. C., Chesnee.—Bank of Chesnee, consolidation of Bank of Chesnee and Citizens' Bank of Chesnee, organized with Howard B. Carlisle, Prest.; V. E. Hatchette, V.-P.; W. D. Hall, Cash.

Tenn., Burns.—Burns Bank & Trust Co. increases capital from \$10,000 to \$15,000.

Tex., El Paso.—General Finance Corp., capital \$500,000, organized with T. Brahan Cunningham, Prest.; Jos. G. Bennis, V.-P. and Secy.; F. D. Gibbs, Treas.

Tex., Sweetwater.—Sweetwater Progressive Life & Accident Assn., organized with Geo. Sheppard, Prest.; J. W. Wade, V.-P.; E. R. Bainbridge, Secy-Treas.

Va., Blacksburg.—Farmers & Merchants Bank, capital \$50,000, organized with J. I. Gardner, Prest.; F. A. Slusser, V.-P.; W. E. McCoy, Cashr.

W. Va., Martinsburg.—Martinsburg Building and Loan Assn., capital \$400,000, incptd., with H. L. Alexander, R. A. Bradford, W. R. Caskey.

New Securities.

Ala., Gadsden—Road.—Will issue \$100,000 warrants. Address Etowah County Commsrs. (Lately noted to vote.)

Ala., Tuscaloosa—Fire Engine and Fire Equipment.—Will vote Meh. 28 on \$14,000 of 6 per cent semi-annual 20-year bonds. Address City Commsrs.

Ark., Fort Smith—Bridge.—Rejected bids on \$200,000 bridge bonds. Address Sebastian County Bridge Comsn. (Lately noted inviting bids.)

Ark., Little Rock—Road.—May vote on \$1,610,600 road bonds. Address Pulaski County Commsrs.

Ark., McGehee—Levee.—Will receive bids until Apr. 5 on \$400,000 of 6 per cent semi-annual levee bonds of Southeast Arkansas Levee Dist. Address H. Thane, Secy.

Ark., Mena—Road.—Hanchett Bond Co., Chicago, Ill., are offering \$50,000 of 6 per cent 1933-37-year Polk County Road Dist. No. 1 bonds.

Ark., Powhatan—Road.—Hanchett Bond Co., Chicago, Ill., are offering \$25,000 of 6 per cent 1936-40-year Western Lawrence County Road Dist. bonds.

Ark., Searcy—Road.—Hanchett Bond Co., Chicago, Ill., are offering \$13,500 of 6 per cent 1930-32 White County, Beebe, Antioch and Lonoke Rd. Dists.

Fla., Bonifay—Road and Bridge.—Hanchett Bond Co., Chicago, Ill., are offering \$35,000 of 6 per cent 1925-38-year Holmes County Road and Bridge bonds.

Fla., Bronson—Road.—Sold \$100,000 road bonds at par and accrued interest. Address Levy County Commsrs. (Lately noted.)

Fla., Chipley—Sewer and Water.—Hanchett Bond Co., Chicago, Ill., is offering \$27,000 of 5 per cent 1949 sewer and water bonds.

Fla., Green Cove Springs—Road and Bridge.

Hanchett Bond Co., Chicago, Ill., are offering \$10,000 of 6 per cent 1925-40-year Clay County Road and Bridge Dist. No. 2 bonds.

Fla., Kissimmee—Lake Front.—Hanchett Bond Co., Chicago, Ill., is offering \$18,000 of 6 per cent 1929-32-year bonds.

Fla., Lake Worth—Improvement.—Hanchett Bond Co., Chicago, Ill., is offering \$16,000 of 6 per cent 1923-39-year bonds.

Fla., Macclenny—Road.—Hanchett Bond Co., Chicago, Ill., is offering \$15,000 of 5 per cent 1930-42 year road bonds.

Fla., Marianna—School.—Hanchett Bond Co., Chicago, Ill., is offering \$10,000 of 5 per cent 1949-year school bonds.

Fla., Pensacola—School.—Hanchett Bond Co., Chicago, Ill., is offering \$5000 of 5½ per cent 1924-year school bonds.

Fla., Port Orange—School.—Will vote Meh. 25 on \$9,000 school bonds, Dist. No. 7. Address Board of Education.

Ga., Americus—School.—Hanchett Bond Co., Chicago, Ill., are offering \$5500 of 5½ per cent 1923-33 year Thaleon School Dist. bonds.

Ga., Americus—School.—Will invite new bids on \$50,000 school bonds, dated Sept. 1; rejected previous bids. Address Shipp & Shepard, Attns. (Lately noted inviting bids.)

Ga., Cordele—School.—Purchased \$20,000 bonds from Exchange Bank and American Bank & Trust Co. Address Mayor Jones.

Ga., Cordele—Light and Water.—Will vote Apr. 29 on \$50,000 water and light bonds; J. Gordon Jones, Mayor. (Lately noted.)

Ga., Cumming—Drainage.—Will sell \$16,664 of 6 per cent \$1,600 denomination Big Creek Drainage Dist. bonds maturing from Jan. 1, 1923 to Jan. 1, 1923, inclusive; J. B. Durham, Commr.

Ga., Hartwell—Drainage.—Hanchett Bond Co., Chicago, Ill., are offering \$25,000 of 8 per cent 1923-1931-year Hart County Shoal Creek Drainage Dist. bonds.

Ga., Louisville—School.—Sold \$74,500 of 6 per cent \$500 denomination school bonds, dated Jan. 1, 1921, to Robinson-Humphries Co., Atlanta, Ga., at 95.05; E. N. Willie, Chrmn. Trustees School Dist. No. 1. (Lately noted inviting bids.)

Ga., Savannah—Street.—Hanchett Bond Co., Chicago, Ill., are offering \$10,000 of 6 per cent 1921-30 year Improvement Dist. bonds.

Ky., Catlettsburg—Road.—Will vote on \$50,000 road bonds. Address Boyd County Court.

Ky., Marion—School.—Will vote Meh. 5 on \$20,000 school bonds. Address R. L. Moore, Judge, Crittenden County Court.

Ky., Pineville—School.—May vote on bonds. Address Board of Education.

La., Bastrop—School.—Hanchett Bond Co., Chicago, Ill., are offering \$8000 of 5 per cent 1929-39 year Jones School Dist. and \$12,000 of 5 per cent 1929-39-year McGinty School Dist. bonds.

La., Covington—Road.—Voted \$250,000 road bonds. Address St. Tammany Parish Police Jury. (Lately noted to vote.)

La., Farmerville—School.—Hanchett Bond Co., Chicago, Ill., are offering \$13,000 of 5 per cent 1931-43-year Bernice High School Dist. bonds.

La., Lake Arthur—Electric.—Voted \$50,000 electric bonds. Address the Mayor.

La., Lake Charles—Hanchett Bond Co., Chicago, Ill., is offering \$7000 of 5 per cent 1922-27, 1929-35-year bonds.

La., Lake Charles—Drainage.—Hanchett Bond Co., Chicago, Ill., are offering \$16,000 of 5 per cent 1927-35-year drainage bonds.

La., Leesville—Improvements.—Hanchett Bond Co., Chicago, Ill., is offering \$10,000 of 5 per cent 1923-25-year improvement bonds.

La., Monroe—Water and Electric.—Will receive bids until Meh. 10 on \$140,000 of 5 per cent semi-annual 1922 to 1924-year bonds, dated Feb. 1, 1921; Arnold Bernstein, Mayor.

La., Monroe—Road.—Will receive bids until Meh. 16 on \$1,107,000 of 5 per cent semi-annual \$1000 denomination bonds, dated Feb. 1, 1920; W. A. O'Kelly, Clk. Ouachita Parish Police Jury. (Supersedes recent item.)

Miss., Greenwood—Road.—Sold \$300,000 of 6 per cent road bonds to First National Bank at par and accrued interest; A. R. Bew, Clk. Leflore County Supvrs. (Supersedes recent item.)

Miss., Hattiesburg—City Hall, School and Fire Equipment.—Will receive bids until Meh. 17 on \$265,000 of 6 per cent semi-annual bonds. Address City Commsrs. (Lately noted noted.)

Miss., Jackson—School.—Sold \$100,000 of 6 per cent semi-annual \$500 denomination bonds, dated Nov. 1, to Jackson State National Bank; A. J. Johnson, City Clk. (Lately noted inviting bids.)

Miss., Laurel—School.—Rejected bids on \$100,000 of 6 per cent \$1000 denomination 15-year bonds, dated Feb. 21, 1921; G. L. Lightsey, City Clk. (Lately noted inviting bids.)

Miss., Pascagoula—Street and Wharf.—City voted \$20,000 street and \$15,000 wharf bonds. Address The Mayor. (Lately noted to vote.)

Miss., Pascagoula—Road.—Will vote Meh. 11 on \$180,000 of 6 per cent \$500 denomination bonds, dated Apr. 1, 1921; serial 1 to 25 years; 1-50 first 5 years; 1-25 next 10 years, and balance in 10 annual instalments; Fred. Taylor, Clk. Jackson County Supvrs.' Dist. No. 4. (Lately noted.)

Mo., Excelsior Springs—Sewer.—Will receive bids until Feb. 24 on 25,000 of 6 per cent 10-20-year sewer system bonds; Walter L. Baker, City Clk.

Miss., Vicksburg—Road.—Will receive bids until Mch. 7 on \$300,100 of 6 per cent \$1000 denomination serial 14½-year bonds, dated Mch. 1; Alex. Fitzhugh, Chrmn. Warren County Highway Commsrs. (Lately noted.)

Miss., Winona—Water and Sewer.—Sold \$45,000 of 6 per cent \$500 denomination bonds, dated Jan. 1, to Kaufman, Smith, Emert & Co., St. Louis, Mo.; J. O. Staples, Mayor. (Previously noted inviting bids.)

Mo., Kirksville—Water.—May vote on \$100,000 to \$200,000 water bonds. Address The Mayor.

Mo., Warrensburg—Electric.—May vote on \$100,000 electric bonds; F. L. Wilcox, Engr. Chemical Bldg., St. Louis, Mo.

N. C., Beaufort—Funding, Road and Bridge.—Sold \$50,000 of 6 per cent semi-annual \$1000 denomination 15-year bonds at 97.77; rejected bids on \$150,000 of 6 per cent \$1000 denomination 25-year road and bridge bonds. Address Carteret County Commsrs.

N. C., Charlotte—Road.—Will vote on \$2,000,000 road bonds. Address Mecklenburg County Commsrs.

N. C., Dobson—Road.—Introduced bill in Legislature providing for issuance of \$150,000 road bonds. Address Surry County Highway Comms.

N. C., Graham—School and Sewers.—Sold \$150,000 of 6 per cent \$1000 denomination serial 30-year bonds, dated Apr. 15, including \$50,000 school and \$100,000 sewers, to Pruden & Co. and Sidney Spizer & Co., both Toledo, O., at par and accrued interest; P. A. Holt, Town Clk. (Lately noted inviting bids.)

N. C., Hertford—Street.—Sold \$75,000 of \$200,000 bonds offered on Feb. 17 to F. J. McGuire, Contr., Norfolk, Va.; B. G. Koonce, City Clk. (Lately noted inviting bids.)

N. C., Hertford—Road and Bridge.—Sold \$300,000 of 6 per cent semi-annual \$1000 denomination 33-year bonds, dated Feb. 1, to Caldwell & Co., Nashville, Tenn.; C. W. Morgan, Chrmn. Perquimans County Commsrs. (Lately noted inviting bids.)

N. C., Hickory—Sewer.—Hanchett Bond Co.,

(Continued on page 170.)

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Garrett Specification Roofs

Bonded for 20 and 10 Years

Barrett Specification 20-Year Bonded Roof, shop of General Railway Signal Co., Eng.: J. F. Aanca, Gen'l Cont.: Gorline & Swan, Roofing Cont.: W. Stuart Smith Co.



Barrett Specification 20-Year Bonded Roof on Utz & Dunn Co., Shoe Factory, Arch.: Leon Stern, Roofers: W. Stuart Smith Co.



All Over Rochester—

A MERICA goes to Rochester for kodaks, for lenses, for thermometers, as well as for many other products. But Rochester, like all the rest of America, comes to Barrett for roofs.

The supremacy of these roofs for permanent flat-roofed buildings is so generally recognized that "as good as Barrett" is the claim offered on behalf of other kinds of roof construction.

The Barrett Specification Roof is the one roof that has withstood the test of time—and time alone determines roof values. Figured on cost per year of service, no other roof is so economical.

Bonded Against Repairs

A SURETY Company Bond, absolutely protecting the owner from maintenance expense, is issued free of charge on Barrett Specification Roofs of 50 squares or larger, in towns of 25,000 or more, and in smaller places where our inspection service is available.

This bond runs for 20 or 10 years, depending upon the type of roof selected. Our only conditions are that The Barrett Specification, revised April 15, 1920, shall be strictly followed and that the roofer shall be approved by us and his work subject to our inspection.

The Barrett Specification Type "AA" 20-Year Bonded Roof represents the most permanent roof covering it is possible to construct, and while we bond it for twenty years only, we can name many roofs of this type that have been in service over forty years and are still in good condition.

Where the character of the building does not justify a roof of such extreme length of life, we recommend the Barrett Specification Type "A" Roof, bonded for 10 years. Both roofs are built of the same high-grade materials, the only difference being in the quantity used.

Full details regarding these Bonded Roofs and copies of The Barrett Specification sent free on request.

The *Barrett* Company



New York	Chicago	Cincinnati	Pittsburgh	Boston	St. Louis
Cleveland			Detroit		New Orleans
Birmingham	Kansas City	Minneapolis			Nashville
Syracuse	Seattle	Peoria	Atlanta	Duluth	
Salt Lake City	Bangor	Washington	Johnstown	Lebanon	
Youngstown	Milwaukee	Toledo	Columbus	Richmond	
Latrobe	Bethlehem	Elizabeth	Buffalo	Baltimore	
Omaha	Houston	Denver	Jacksonville		

THE BARRETT COMPANY, LIMITED: Montreal Toronto Winnipeg
Vancouver St. John, N. B. Halifax, N. S.



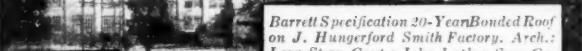
Barrett Specification 20-Year Bonded Roof on Old Chamber of Commerce Bldg, Arch: Leon Stern, Cont.: A. Friedrich & Sons Co. Roofers: Knowles & Peck Co., Inc.



Barrett Specification 20-Year Bonded Roof on Bldg No. 13, Bausch & Lomb Optical Co. Gen'l Cont.: John Luther & Sons Co. Rf'g Cont.: John Siddons Co.



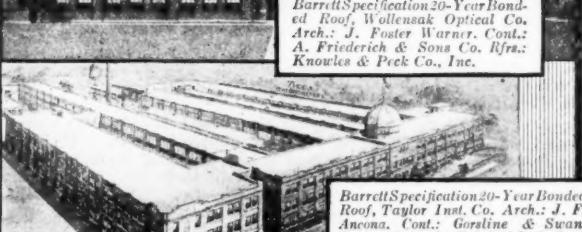
Barrett Specification Roof on New Chamber of Commerce Building, Arch.: Foster & Gude, New York, Cont.: A. Friedrich & Sons Co. Roofers: The John Siddons Co.



Barrett Specification 20-Year Bonded Roof on J. Hungerford Smith Factory, Arch.: Leon Stern, Cont.: John Luther Sons Co. Rf'rs.: Knowles & Peck Co., Inc.



Barrett Specification 20-Year Bonded Roof, Wollensak Optical Co. Arch.: J. Foster Warner, Cont.: A. Friedrich & Sons Co. Rf'rs.: Knowles & Peck Co., Inc.



Barrett Specification 20-Year Bonded Roof, Taylor Ind. Co. Arch.: J. F. Aanca, Cont.: Gorline & Swan, Cons'r: A. Friedrich & Sons Co. Rf'rs.: Knowles & Peck Co., Inc. W. Stuart Smith Co., Inc.

(Continued from page 168.)

Chicago, Ill., is offering \$14,000 of 6 per cent 1923-34, 1948-52-year sewer bonds.

N. C., Kenansville—Road and Bridge.—Sold \$100,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Mch. 1, 1921, to Breed, Elliott & Harrison, Cincinnati, at 100.15; W. G. Kornegak, Chrmn. Duplin County Commsrs. (Lately noted inviting bids.)

N. C., Kenansville—School.—Will receive bids until Mch. 7 on \$50,000 bonds issued for benefit Calypso Special Tax Dist.; 6 per cent semi-annual \$1000 denomination, dated Feb. 1, 1921; M. H. Wootten, Secy. and County Supt. Board of Education.

N. C., Kings Mountain—Hanchett Bond Co., Chicago, Ill., is offering \$10,000 of 6 per cent 1923-29-33-year bonds.

N. C., Lexington—School.—Will vote on \$225,000 school bonds. Address Davidson County Board of Education.

N. C., Mount Olive—Electric.—Will receive bids until Mch. 3 on \$30,000 of 6 per cent semi-annual \$1000 denomination electric bonds, dated Jan. 12, 1921, maturing serially one bond on Jan. 12 in each of years 1924 to 1949, inclusive; two bonds on Jan. 12 in each year 1950 to 1951; T. R. Thigpen, Town Clk.

N. C., Nashville—Road and Bridge.—Will receive bids until Mch. 7 on \$210,000 of 6 per cent semi-annual 12½-year road and bridge bonds; J. B. Boddie, Clk. Nash County Commissioners.

N. C., Newton—Road.—Will issue \$500,000 road bonds. Address Catawba County Court.

N. C., Ramseur—School.—May issue \$75,000 school bonds. Address County School Supt., Asheboro, N. C.

N. C., Trenton—School.—Hanchett Bond Co., Chicago, Ill., are offering \$5000 of 6 per cent 1931-year Jones County White Oak School Dist. bonds.

N. C., Wilson—School.—Will receive bids until Mch. 22 on \$10,000 of 6 per cent 20-year \$1000 denomination bonds of Stauntonburg School Dist., dated Apr. 1; Chas. L. Coon, Secy. Wilson County Board of Education.

N. C., Yanceyville—Road.—Hanchett Bond Co., Chicago, Ill., is offering \$6000 of 6 per cent 1928-35-43-44-45-year road bonds.

Okla., Blackwell—Improvement.—Hanchett Bond Co., Chicago, Ill., are offering \$18,000 of 6 per cent 1921-30-year improvement bonds.

Okla., Enid—Improvement.—Hanchett Bond Co., Chicago, Ill., are offering \$10,000 of 6 per cent 1921-30-year improvement bonds.

Okla., Eufaula—Sewer.—Hanchett Bond Co., Chicago, Ill., is offering \$19,000 of 6 per cent 1945-year sewer bonds.

Okla., Grandfield—Sewer.—Hanchett Bond Co., Chicago, Ill., is offering \$6000 of 6 per cent 1929-1939-year sewer bonds.

Okla., Heavener—Sewer.—Hanchett Bond Co., Chicago, Ill., is offering \$36,000 of 6 per cent 1944-year sewer bonds.

Okla., Holdenville—Road.—May vote on \$100,000 road bonds. Address Hughes County Commsrs.

Okla., Miami—School.—Hanchett Bond Co., Chicago, Ill., are offering \$8000 of 6 per cent 1923-34-year School Dist. No. 31 bonds.

Okla., Okmulgee—Street.—Will sell \$250,000 street bonds. Address The Mayor.

Okla., Pauls Valley—Hanchett Bond Co., Chicago, Ill., are offering \$10,000 of 6 per cent 1930 optional 1922-23-year Paving Dist. bonds.

Okla., Sallisaw—Bridge.—Will vote Mch. 29 on \$202,000 bridge bonds. Address Sequoyah County Commsrs.

Okla., Walters—School.—Hanchett Bond Co., Chicago, Ill., is offering \$19,000 of 6 per cent 1925, 1930-year bonds.

Okla., Woodward—School.—Hanchett Bond Co., Chicago, Ill., are offering \$10,500 of 5½ per cent 1927-37-year School Dist. No. 2 bonds.

S. C., Clover—School.—Will vote on \$40,000 school bonds. Address The Mayor.

S. C., Greer—Hydro-electric.—Sold \$40,000 of 6 per cent serial hydro-electric bonds to Savings Bank of Greer. Address City Commsr., Public Works.

S. C., Greenville—Hospital and Fire Department.—City through City Council entered into contract with Alester G. Furman Co., Greenville, and Security Trust Co., Spartanburg, S. C., for sale \$200,000 hospital and fire-department equipment bonds at 90 and interest; 5 per cent 20-year bonds. Address The Mayor.

S. C., Spartanburg—School.—Sold \$300,000 of 6 per cent school bonds to R. M. Grant & Co., New York, for \$302,172; Edward S. Tenet, Chrmn. Spartanburg School Trustees. (Supersedes recent item.)

S. C., Union—Road.—Hanchett Bond Co., Chicago, Ill., are offering \$35,000 of 6 per cent 1922-35-year Jonesville Township road bonds.

S. C., Woodruff—Street.—Sold \$47,500 of 5½ per cent street bonds to Security Trust Co., Spartanburg, S. C. Address The Mayor.

S. C., York—School.—Will vote on \$125,000 bonds of Yorkville School Dist. No. 11; F. McDow, Chrmn. Board Trustees.

Tenn., Alcoa—Sewer.—Sold \$125,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Jan. 1, to Aluminum Co. of America, Pittsburgh, Pa.; A. B. Smith, Recorder, Alcoa, Tenn. (Supersedes previous item.)

Tenn., Cleveland—Street.—Sold \$100,000 of 6 per cent \$500 denomination 20-year bonds, dated Jan. 1, to J. C. Mayer & Co., Cincinnati, O., at 96; L. L. Woolen, Mayor. (Previously noted inviting bids.)

Tenn., Henderson—Road.—Will receive bids until Mch. 7 on \$90,000 of 5½ per cent semi-annual 1-30-year road bonds; C. L. Parrish, Chester County Clk.

Tenn., Jackson—Road.—Will sell \$300,000 road bonds recently voted. Address Madison County Commsrs.

Tenn., Alto—Street and Water.—J. L. Arlitt, 111 Broadway, New York, purchased \$15,000 street and \$25,000 water bonds; semi-annual; \$1000 denomination; dated Jan. 21, 1921.

Tenn., Annona—School.—Annona Independent School Dist. voted \$35,000 bonds.

Tenn., Austin—Road.—Will vote Mch. 26 on \$35,000 bonds of Road Dist. No. 7; 5½ per cent serial 30-year bonds; G. S. Matthews, Travis County, Judge.

Tenn., Breckenridge—Road.—Will receive bids in March on \$2,500,000 of 5½ per cent semi-annual road bonds; E. E. Conlee, Stephens County Auditor.

Tenn., Coleman—Road.—F. J. Reese, R. L. Bryan, County Judges, Fort Worth, Tex., will receive bids until Mch. 2 on \$48,000 of 5 per cent 1 to 3-year semi-annual road bonds.

Tenn., Comanche—Sewer.—Will vote Mch. 27 on \$20,000 sewer bonds. Address The Mayor.

Tenn., Comanche—Road.—F. J. Reese, R. L. Bryan, County Judges, Fort Worth, Tex., will receive bids until Mch. 2 on \$200,000 of 5½ per cent 1-30-year road bonds, and \$40,000 of 5 per cent 10-30-year semi-annual road bonds.

Tenn., Edinburg—Jail.—J. L. Arlitt, 111 Broadway, New York, purchased \$100,000 of 7 per cent semi-annual \$1000 denomination Hidalgo County jail warrants, dated Dec. 1, 1920. (Supersedes recent item.)

Tenn., El Paso—General Finance Corp., capital \$50,000, ineqtd. with T. Brahma Cunningham, E. Gordon Perrey, Sam Watkins.

Tenn., Franklin—Road.—Sold \$35,000 road bonds. Address Robertson County Commsrs. (Previously noted voting bonds.)

Tenn., Georgetown—Road.—Will receive bids until Mch. 1 on \$672,000 of 5 per cent serial \$1000 denomination 1 to 30-year bonds, dated Aug. 10, 1919; F. D. Love, Williamson County Judge.

Tenn., Glen Rose—Road.—F. J. Reese, R. L.

Bryan, County Judges, Fort Worth, Tex., will receive bids until Mch. 2 on \$50,000 of 5 per cent semi-annual 1-30-year road bonds.

Tex., Greenville—Breg, Garrett & Co., 1201 Praetorian Bldg., Dallas, Tex., purchased \$25,000 of 6 per cent funding bonds jointly with J. E. Blaine & Co., Dallas, Tex.

Tex., Hallettsville—Road.—Rejected bids on \$60,000 of 5 per cent \$500 denomination 29-year bonds, dated Aug. 12; J. A. Sommerlatte, County Judge. (Lately noted inviting bids.)

Tex., Jacksboro—Funding.—Breg, Garrett & Co., 1201 Praetorian Bldg., Dallas, Tex., purchased \$55,000 of Jack County 7 per cent funding warrants, maturing 1 to 15 yrs.

Tex., Liberty—Road.—Hanchett Bond Co., Chicago, Ill., are offering \$12,500 of 5½ per cent optional 1938 Road Dist. No. 5 bonds.

Tex., Liberty—Road.—Will vote on \$25,000 road bonds, including \$325,000 Precinct No. 1 and \$250,000 Precinct No. 2. Address Liberty County Commsrs.

Tex., Marlin—Road.—Will receive bids until Mch. 10 on \$500,000 of 5 per cent \$1000 denomination 28-year road bonds of Justice Precinct No. 1; E. M. Dodson, County Judge.

Tex., Pecos—Road.—Will vote Mch. 8 on \$40,000 road bonds. Address Reeves County Commsrs.

Tex., Pecos—Street.—May vote on \$100,000 street bonds. Address The Mayor.

Tex., San Augustine—Road.—Hanchett Bond Co., Chicago, Ill., are offering \$18,500 of 5½ per cent 1924-28, 1935-49-year Road Dist. No. 5 bonds.

Tex., Sierra Blanca—Courthouse.—Hanchett Bond Co., Chicago, Ill., is offering \$9000 of 5½ per cent 1959 optional 1929-year courthouse bonds.

Tex., Waco—Refunding.—Rejected bids on \$96,000 of 5 per cent semi-annual \$1000 denomination 30-year refunding bonds. Address The Mayor. (Lately noted inviting bids.)

Tex., Wichita Falls—Hospital.—Voted \$75,000 hospital bonds. Address Wichita County Commsrs.

Va., East Radford—Street.—Will vote on \$400,000 street bonds; Wm. E. Gilbert, Mayor. (Supersedes recent item.)

Va., Rustburg—Road.—Will receive bids until Mch. 7 on \$136,000 road bonds in Rustburg Dist. Address Campbell County Supvrs.

W. Va., Ceredo—School.—Will receive bids until Mch. 23 on \$128,000 of 6 per cent semi-annual \$1000 denomination 20-year bonds, dated Apr. 1, 1921; H. L. White, Supt. Schools, Kenova, W. Va. (Previously noted to vote.)

W. Va., Welch—School.—Will receive bids until Mch. 1 on \$270,000 of 6 per cent \$1000 and \$500 denomination bonds, dated Jan. 1, 1921, maturing serially \$18,000 on Jan. 1, 1926; \$18,000 in each succeeding year until bonds have been paid; Effie F. Beavers, Secy. Board of Education Browns Creek Dist.

W. Va., Weston—School.—Sold \$50,000 of 6 per cent of \$500 denomination bonds to Lewis County Bank and National Exchange Bank jointly; G. W. Blair, Secy. Collins Settlement School Dist. (Lately noted inviting bids.)

Financial Notes.

Blue Ridge Building and Loan Assn., Asheville, N. C., increases capital \$3,000,000 to \$5,000,000.

Greater Louisville Building Assn., Louisville, N. C., increases capital from \$3,000,000 to \$5,000,000.

Florence Title, Trust & Investment Co. (formerly Palmetto Construction Co.), Florence, S. C., will increase capital from \$50,000 to \$200,000; J. B. Aiken, Secy.

Texas Co., Houston, Tex., will hold annual meeting Mch. 31 to recommend to stockholders a 15 per cent increase in capital stock increasing amount from \$143,000,000 to \$164,450,000.